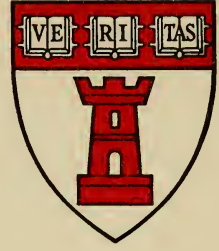


Archives

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HARVARD SCHOOL OF
DENTAL
MEDICINE

1971-1972

OFFICIAL
REGISTER
OF
HARVARD UNIVERSITY

VOL. LXVIII

SEPTEMBER 29, 1971

NO. 22

OFFICIAL REGISTER OF HARVARD UNIVERSITY

PUBLICATION OFFICE, HOLYOKE CENTER 651
1350 MASSACHUSETTS AVENUE, CAMBRIDGE, MASS.

Second-class postage paid at Boston, Mass.

Issued at Cambridge Station, Boston, Mass., once in January, once in February, twice in April, once in May, three times in June, three times in July, six times in August, five times in September, twice in October, and once in December.

These publications include the report of the president; the general catalogue issue; the announcements of the College and the several professional schools of the University; the courses of instruction; the pamphlets of the several departments; and the like.

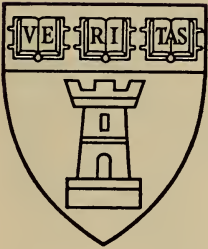
PRINTED IN THE UNITED STATES OF AMERICA
BY THE HARVARD UNIVERSITY PRINTING OFFICE



MAIN ENTRANCE TO THE DENTAL BUILDING, LONGWOOD AVENUE, BOSTON

1971 — 1972

HARVARD SCHOOL OF
DENTAL
MEDICINE



*General Information
and
Announcement of Courses*

188 LONGWOOD AVENUE
BOSTON, MASSACHUSETTS 02115

PUBLISHED BY HARVARD UNIVERSITY
CAMBRIDGE, MASSACHUSETTS 02138

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Dental Education at Harvard University

THE dental school established at Harvard University in 1867 was the ninth such school and the first university dental school in the country. From its inception it has been closely affiliated with the Harvard Medical School, which has been in existence since 1782. It is interesting to note that an invitation from the Medical School to a group of Boston dentists led to the formation of the school. On March 29, 1867, the medical committee gave the following reasons for this step:

“Dentistry has become with the past quarter of a century a most important art, a knowledge of which supposes not only mechanical skill, but a thorough acquaintance with the processes of dentition, physiologically and pathologically considered. Hence arises the necessity for a knowledge of the general principles of anatomy, physiology, surgery, chemistry, and materia medica, to which should be added some knowledge of the theory and the practice of medicine. A medical school already established is therefore the best place at which these various studies can be attended to.”

The present plan of education evolved from a reorganization of the Harvard Dental School in years just preceding World War II. The Harvard School of Dental Medicine offers a four year course which is fully approved by the Council on Dental Education of the American Dental Association and which leads to the Doctor of Dental Medicine degree. The aim of the program is to provide a broad background which will enable a graduate to move easily into general practice, advanced training for specialty practice, teaching or research.

A special feature of the program is that dental students take

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courses with their medical colleagues in all the basic medical sciences: Cellular and Molecular Biology during the first semester, and an integrated approach to Human Biology throughout the next eleven months. During this year and a half, the Harvard medical and dental students usually meet as a combined class. The following seventeen months are almost wholly given over to clinical areas with the bulk of the time spent in the School clinics. Hospital teaching, which occupies a portion of the second year, continues through the clinical years with the emphasis placed on diagnosis and treatment of diseases of the oral cavity. During the Externship Period, students rotate through the dental clinics at the Massachusetts General, the Children's, and Veterans Administration Hospitals and Neighborhood Health Centers. In addition to its own staff and those of the Medical School and the teaching hospitals, the Dental School draws for instruction upon the faculties of the Harvard School of Public Health, the science departments of the University in Cambridge, and the Forsyth Dental Center. The final year consists of an individually designed Elective Period.

Early in their careers students are introduced to research in progress at the School and at the affiliated institutions. Here the staff conducts investigations in growth and development, the mechanisms of oral disease and the basic science disciplines. Students are encouraged to take part in these activities.

Individual instruction, group conferences and seminars have replaced many of the lectures. In the School's clinic as well as in the hospital and laboratory, the small teaching groups allow individual supervision and flexible methods of instruction. Under this system the teaching can be adapted to the needs of the particular student, and he in turn can progress as rapidly as he assimilates course material.

With such rich opportunities open to him, it is literally true that a student's own initiative is the largest determinant of just how much education he will acquire at the School of Dental Medicine. Whether he goes on to a specialty, general dentistry, or dental education and research, his background, which will be

strong both in basic sciences and in clinical dentistry, will provide him with excellent credentials. The recipient of the degree of D.M.D. from the Harvard School of Dental Medicine is eminently qualified to meet the challenge of dentistry in the future.

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- MARIO G. MEZZACANE, D.D.S., *Clinical Assistant in Prosthetic Dentistry.*
- CHARLES B. MILLSTEIN, D.M.D., *Clinical Instructor in Operative Dentistry.*
- PHILIP L. MILLSTEIN, D.M.D., *Clinical Instructor in Prosthetic Dentistry.*
- RICHARD L. MINER, D.D.S., *Clinical Instructor in Oral Surgery.*
- CEDRIC MINKIN, PH.D., *Principal Research Associate in Oral Biology & Pathophysiology.*
- COENRAAD F. A. MOORREES, D.D.S., *Professor of Orthodontics at Forsyth Dental Center.*
- JANE B. MOOSBRUKER, PH.D., *Lecture on Ecological Dentistry.*
- ROBERT H. MORIARTY, D.D.S., *Clinical Assistant in Operative Dentistry.*
- EDWARD M. MORIN, D.M.D., *Assistant Clinical Professor of Orthodontics.*
- KEITH D. MORRIS, D.D.S., *Clinical Assistant in Ecological Dentistry.*
- ANNA MORSE, B.S., M.S., *Associate in Dentistry.*
- JAMES L. MOSS, III, D.M.D., *Clinical Fellow in Pediatric Dentistry.*
- JAMES E. MULVIHILL, D.M.D., *Lecturer on Periodontology.*
- RICHARD L. MYERSON, M.S., *Lecturer in Prosthetic Dentistry.*
- ELIES NAWFEL, D.M.D., *Clinical Assistant in Oral Surgery.*
- DONALD B. NELSON, D.M.D., *Research Fellow in Orthodontics.*
- EUGENE M. NELSON, D.M.D., *Clinical Assistant in Orthodontics.*
- GEORGE NELSON, M.ED., M.P.H., *Assistant to the Dean for Administration.*
- VINCENT J. ODDO, JR., D.D.S., *Clinical Instructor in Prosthetic Dentistry.*
- PETER OFNER, PH.D., *Assistant Professor of Pharmacology (PT)*
- FREDERIC PAPERTH, D.M.D., *Research Fellow in Pediatric Dentistry.*
- RICHARD PERKRUHN, D.M.D., *Clinical Assistant in Ecological Dentistry.*
- LAWRENCE PARIS, D.D.S., *Clinical Assistant in Prosthetic Dentistry.*
- E. ALBERT PETERSEN, D.M.D., *Assistant in Pediatric Dentistry.*
- RICHARD L. PICKETT, D.M.D., *Clinical Assistant in Operative Dentistry.*
- THOMAS H. POOLE, JR., D.D.S., *Clinical Assistant in Endodontics.*
- ZIGMUNT W. POZATEK, D.M.D., *Clinical Instructor in Oral Surgery.*
- GARY PRESCOTT, D.D.S., *Clinical Assistant in Orthodontics.*
- LUKA RABADJIJA, M.D., *Principle Research Associate in Oral Biology & Pathophysiology.*
- MIRJANA RABADJIJA, M.D., *Associate in Oral Biology and Pathophysiology.*
- KENNETH RANKIN, D.D.S., *Instructor in Prosthetic Dentistry.*
- FRANK RAYMONDI, *Associate in Dentistry.*
- HOWARD L. REUBEN, D.D.S., *Lecturer on Endodontics.*
- UTE I. RICHARDSON, PH.D., *Clinical Instructor in Pharmacology.*
- EARLE H. ROSENBERG, D. M. D., *Assistant Clinical Professor of Oral Surgery.*
- LEONIE M. ROSENOER, B.D.S., *Research Fellow in Periodontology and Oral Medicine.*
- FRANKLIN D. ROTH, D.M.D., *Clinical Assistant in Prosthetic Dentistry.*
- JULIAN M. ROTHBLATT, D.M.D., *Clinical Instructor in Orthodontics.*

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- ROBERT RUSTIGIAN, PH.D., *Assistant Professor of Bacteriology (PT).*
JAMES A. SAALFIELD, M.B.A., *Administration Assistant.*
MASAKO SAKAMOTO, D.D.S., *Associate in Periodontology.*
SEIZABURO SAKAMOTO, D.M.D., PH.D., *Junior Associate in Periodontology.*
ELIOT W. SALLOWAY, D.M.D., *Clinical Instructor in Periodontology.*
EMILE SAMAHA, D.M.D., *Assistant Clinical Professor in Prosthetic Dentistry.*
WILLIS SANDERLIN, D.D.S., *Clinical Instructor in Ecological Dentistry.*
STUART H. SANDREW, D.D.S., *Instructor in Periodontology.*
S. PATRIC SCAVOTTO, D.M.D., *Assistant Clinical Professor of Dental Radiology.*
JAY S. SCHAWB, D.M.D., *Clinical Assistant in Pediatric Dentistry.*
HUBERT SCHROEDER, PH.D., *Visiting Research Associate in Periodontology.*
ABRAHAM SCHWARTZ, D.M.D., *Instructor in Operative Dentistry.*
FRANCES S. SCIMONE, D.M.D., *Clinical Assistant in Operative Dentistry.*
PAUL L. SEGAL, D.D.S., *Clinical Instructor in Periodontology.*
EDWARD B. SELDIN, D.M.D., *Clinical Fellow in Oral Surgery.*
DENNIS SELECHNIK, D.D.S., *Research Fellow in Periodontology and Oral Medicine.*
JOEL M. SERVOS, D.D.S., *Research Fellow in Orthodontics.*
HERBERT A. SHAW, A.B., *Director of Medical Information with the University News Office.*
JAMES H. SHAW, PH.D., *Professor of Nutrition.*
LAURENCE SHESLER, JR., D.D.S., *Lecturer on Dental Auxiliary.*
GERALD SHKLAR, D.D.S., *Professor of Oral Pathology.*
ROBERT H. SHOLLER, D.M.D., *Clinical Assistant in Oral Surgery.*
LEONARD B. SHULMAN, D.M.D., *Assistant Clinical Professor of Oral Surgery.*
STEPHEN SHUSTERMAN, D.M.D., *Assistant in Periodontology.*
CARL L. SIEGAL, D.M.D., *Clinical Assistant in Prosthetic Dentistry.*
SIGMUND S. SOCRANSKY, D.D.S., *Assistant Clinical Professor of Periodontology at the Forsyth Dental Center.*
JAMES H. SOWLES, D.M.D., *Clinical Instructor in Operative Dentistry.*
RALPH B. SOZIO, D.M.D., M.S., *Assistant Clinical Professor of Prosthetic Dentistry.*
MORTON SPECK, D.M.D., *Clinical Instructor in Orthodontics.*
JAMES SPRINGER, D.M.D., *Clinical Instructor in Oral Surgery.*
JOSEPHINE STEINHURST, A.B., *Lecturer on Ecological Dentistry.*
J. HENRY STEMPIEN, D.M.D., *Assistant Clinical Professor of Oral Surgery.*
BERT D. STERN, D.M.D., *Assistant Clinical Professor of Periodontology.*
JOSEPH STOLMAN, D.M.D., M.S., *Lecturer on Periodontology.*
MORTIMER STONE, D.D.S., *Clinical Assistant in Prosthetic Dentistry.*
STEPHEN STONE, D.M.D., *Assistant Clinical Professor of Periodontology.*
WARD R. STOOPS, D.M.D., *Instructor in Pediatric Dentistry.*
PETER E. STROCK, D.D.S., *Instructor in Oral Diagnosis.*

- DAVID L. SUMNEY, D.M.D., *Research Fellow in Periodontology and Oral Medicine.*
- LENNARD T. SWANSON, D.M.D., *Assistant Clinical Professor of Pediatric Dentistry.*
- EDWARD A. SWEENEY, D.M.D., *Associate Professor of Pediatric Dentistry.*
- GEORGE SZABO, PH.D., M.SC., *Principle Associate in Oral Biology and Pathophysiology.*
- AVIAD TAMSE, B.D.S., *Clinical Fellow in Operative Dentistry.*
- ARMEN H. TASHJIAN, JR., M.D., *Professor of Pharmacology.*
- LLOYD TAYLOR, D.D.S., *Research Fellow in Orthodontics.*
- RICHARD TAYLOR, D.M.D., *Lecturer on Oral Surgery.*
- RODNEY P. THOMAS, D.M.D., *Lecturer on Endodontics.*
- G. EARL THOMPSON, D.M.D., *Clinical Professor of Operative Dentistry.*
- MALCOLM E. THORNTON, D.M.D., *Clinical Assistant in Ecological Dentistry.*
- JOHN P. TINETTI, D.D.S., *Lecturer on Endodontics.*
- WILLIAM H. TINGEY, JR., D.M.D., *Clinical Assistant in Operative Dentistry.*
- CHARLES M. TRAURING, D.M.D., *Clinical Instructor in Prosthetic Dentistry.*
- MYRON J. VAN LEEUWEN, D.D.S., *Associate Clinical Professor of Operative Dentistry.*
- HAROLD VELLEMAN, *Associate in Dentistry.*
- GERALD VERMETTE, D.D.S., *Clinical Assistant in Operative Dentistry.*
- EDWARD F. VOELKEL, *Associate in Pharmacology.*
- GERALD S. WANK, *Lecturer in Periodontology.*
- ROBERT E. WATERMAN, PH.D., *Instructor in Anatomy.*
- ROBERT F. WATTON, D.M.D., *Lecturer in Pediatric Dentistry.*
- DAVID L. WEBBER, D.M.D., *Instructor in Pediatric Dentistry.*
- ALLAN L. WEINERS, *Clinical Assistant in Prosthetic Dentistry.*
- PAUL X. WELCH, D.D.S., *Clinical Assistant in Operative Dentistry.*
- WILLIAM D. WELLOCK, D.M.D., M.P.H., *Assistant Clinical Professor of Ecological Dentistry.*
- RONALD E. WESTON, D.D.S., *Clinical Assistant in Ecological Dentistry.*
- ROBERT T. WHITTAKER, D.M.D., *Clinical Instructor in Prosthetic Dentistry.*
- WAYNE WIBBY, D.D.S., *Clinical Assistant in Oral Surgery.*
- MURIEL WIKSWO, PH.D., *Research Fellow in Oral Biology and Pathophysiology.*
- GEORGE F. WILGRAM, PH.D., *Research Associate in Oral Pathology.*
- RAY C. WILLIAMS, D.M.D., *Research Fellow in Periodontology and Oral Medicine.*
- ROBERT WILSON, D.D.S., *Clinical Assistant in Oral Surgery.*
- WILLIAM L. WILSON, D.M.D., *Lecturer on Orthodontics.*
- THOMAS F. WINKLER 3D, D.M.D., M.S.D., *Lecturer on Endodontics.*
- ANTHONY M. WOJCICKI, D.M.D., *Lecturer on Pediatric Dentistry.*

HARVARD UNIVERSITY

HENRY K. WOODBREY, D.M.D., *Clinical Assistant in Dental Auxiliary Utilization & Training.*

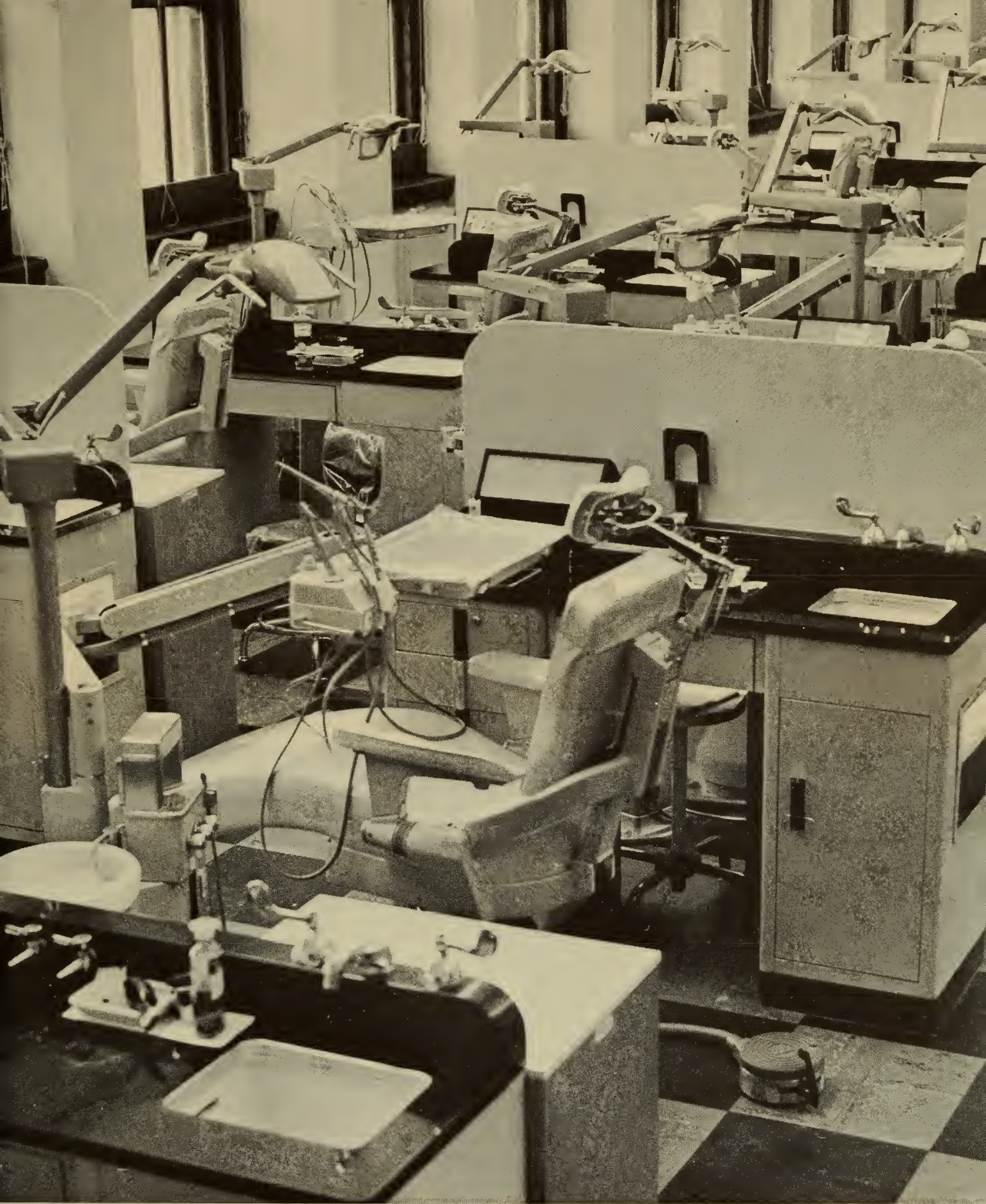
PAUL WYLAN, D.D.S., *Clinical Assistant in Periodontology.*

GEORGE H. WYSHAK, D.M.D., *Assistant Clinical Professor of Dental Auxiliary Utilization & Training.*

PETER KAI-JEN YEN, D.M.D., *Associate Clinical Professor of Orthodontics.*

NOAH I. ZAGER, D.M.D., *Associate in Periodontology.*

VANGEL R. ZISSI, D.M.D., *Lecturer on Endodontics.*



CLINIC, HARVARD SCHOOL OF DENTAL MEDICINE



HARVARD MEDICAL SCHOOL

THE FRANCIS A. COUNTWAY LIBRARY OF MEDICINE



General Information

Buildings

The Dental Building on Longwood Avenue contains the Office of the Dean, the Dental Clinic, lecture and conference rooms, and research laboratories. Also included are laboratories for fellows in training, animal quarters, controlled temperature rooms, electron microscopes and laboratory areas for studies involving use of radio-active materials. The Clinic facilities consist of a main clinic with thirty-two chairs, each with instrument cabinet and chairside bench equipped for general dentistry; a dental laboratory, technique laboratory and preparation room; a dental surgery clinic and an X-ray and photography clinic. High-speed air turbine handpieces and medium speed rotating instruments are available for use by all students. A new building recently has been added to the School of Dental Medicine which is used for additional patient care, teaching, and research facilities.

Next door are the five large buildings of the Medical School. Building A (Administration) contains the administrative offices of the Medical School, and the Warren Museum. Building B accommodates the Departments of Anatomy and Pharmacology. Building C provides space for the Departments of Physiology and Biological Chemistry. Building D is occupied by the Departments of Bacteriology, Pathology, Preventive Medicine, and also laboratories of the Department of Medicine. Building E houses the Departments of Legal Medicine and Tropical Public Health.

Affiliated Institutions

The Massachusetts General Hospital. This is a general hospital founded in 1811 and ever since associated with the Medical School. There are services in medicine, dentistry, surgery, pediatrics, dermatology, genito-urinary diseases, orthopedics, gynecology, neurology,

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neurosurgery, anesthesia, and psychiatry, all of which are used in giving instruction in these special subjects in the Schools of Medicine and Dental Medicine.

The Children's Hospital is located on Longwood Avenue adjacent to the Medical School. This is a generalized hospital for the care of the younger age group. The hospital maintains pediatric, surgical, neurosurgical, dental, orthopedic, radiologic, psychiatric, and pathological services with their associated specialties. All services are available for teaching purposes.

Hospitals used for teaching in the second, third and fourth years include the Massachusetts General Hospital, the Children's Hospital, the Boston City Hospital, the Peter Bent Brigham Hospital, the Beth Israel Hospital, and the Veterans Administration Hospitals in Bedford, Brockton, and West Roxbury. In addition the University Health Service and the Martha Eliot, Bunker Hill, and Dimock Community Health Centers also are sites of clinical teaching in the third and fourth years.

The West Roxbury Veterans Administration Hospital is a 300 bed general Medical and Surgical facility. It has also been designated a Spinal Cord Injury, and Open Heart Surgery Center, and as such, offers unique opportunity for students to learn the special dental requirements of these patients. The dental service provides comprehensive dental care for all eligible veterans. Through training programs the service is providing clinical training to students of dentistry, dental hygiene and dental assisting.

The Veterans Administration Hospital in Brockton is a neuropsychiatric hospital with approximately 1000 beds. The clinical facilities consist of nine chairs and units, a panorex X-ray and two conventional X-rays. Since this is a neuropsychiatric hospital they do have problem patients and students have an opportunity to learn how to handle them.

The Veterans Administration Outpatient Clinic at Court Street, Boston, provides a dental service whereby veterans obtain the most up-to-date dental care through service, research and education. The Dental Service demonstrates its willingness to serve the dental profession as a whole by helping to train professional and auxiliary manpower. A close affiliation is maintained with the Harvard School of Dental Medicine.

The Veterans Administration Hospital in Bedford is in a therapeutic community devoted primarily to providing comprehensive inpatient and outpatient treatment for all types of psychiatric illnesses, in addition, general medical, surgical, and nursing home care services are provided. Complete library services are available to students. Dental services are rendered in a well equipped six cubicle clinic and separate oral surgery, oral roentgenography, and dental laboratory units. A teaching area is provided for presenting in-service training programs, consultant seminars and contains a library of single concept training films.

Libraries

Comprehensive library resources are in the nearby Francis A. Countway Library of Medicine which serves the School of Dental Medicine, the Medical School and the School of Public Health. The Countway Library opened its doors to readers in May, 1965, and combines the resources of the Harvard Medical Library with those of the Boston Medical Library. It contains 430,000 volumes and receives currently more than 4,500 different periodicals, and is the largest university-centered medical library in the country. The Countway Library is open 8 A.M. to 11:30 P.M. weekdays, 9 A.M. to 5 P.M. Saturdays, and 2 to 11:30 P.M. Sundays.

In addition to its holding of current books and periodicals, the Countway Library has extensive collections of historical materials, dating from the 15th century. Its History of Medicine Department provides modern facilities for the effective use of these books and other rarities.

There are also a number of important convenience collections in the medical quadrangle, notably the Anatomy Library (Building B2-220) and the Bowditch Library of Physiology and Biological Chemistry (Building C-321).

All members of the University may borrow from the College Library in Cambridge and daily messenger service is provided from the College Library and various other University libraries.

Students of the School have privileges at other Boston area libraries, including that of the Massachusetts Institute of Technology and the Boston Public Library.

Requirements for Admission

Candidates for admission to the first-year class must present evidence satisfactory to the Committee on Admission, not simply that they have passed the courses necessary to fulfill the requirements, but also that their college work and other credentials have been of such character as to give promise of work of high quality in the dental course. Outstanding students may, in exceptional cases, be considered acceptable for admission after only two years of college work. Excellent students with three years of preparation are accepted, but in practice, the Committee recommends four years of college. The final judgment concerning admission of any student always rests with the Committee on Admission. Inability to finance a dental education should not be a deterrent to application since the resources of the School are sufficient to cover justifiable need.

In general, the School considers for admission to its classes students in good standing in arts or in sciences in colleges listed as approved in the *Higher Education Directory*, published by the Office of Education of the U.S. Department of Health, Education, and Welfare.

Applications may be obtained at the Office of Student Affairs after July 1 of the year preceding the expected date of admission. Applications will not be considered from candidates who have been refused admission on two prior occasions or who have applied to the Harvard Medical School.

In accordance with the policies of the American Association of Dental Schools, no provisional or final acceptance for admission will be given before December 1 of the academic year prior to matriculation. After being given an acceptance, the applicant will be allowed a waiting period of at least 30 days. After April 15, the waiting period will be at the discretion of the School.

Recommended Courses

Listed below are the recommended college credits which should be secured to insure adequate preparation for graduate study and to meet present legal requirements of state licensing boards. Credit achieved through the College Entrance Examination Board Advanced Placement Program will be accepted as meeting the minimum requirements, but students are urged to take advanced work in those areas.

Biology: The student should take at least one year of biology which includes adequate laboratory work. The combination of one semester of zoology and one semester of botany is acceptable, but bacteriology, human anatomy and histology will not be considered as meeting the biology requirements. A satisfactory course should show college credits of at least eight semester hours.

Chemistry: The student should acquire a sound understanding of the basic principles of chemistry, both inorganic and organic. He should take not less than 16 semester hours of chemistry, which should be about equally divided between inorganic and organic chemistry. Biochemistry will not be accepted as part of these recommendations.

To be adequately prepared for the work in chemistry in the dental school, the student should have experience with the application of chemical laws to gases and solutions, as well as some familiarity with analytical techniques.

Physics: The student should acquire an understanding of the general principles of physical laws and phenomena and have experience in mechanics, heat, light, sound and electricity. College credit for eight semester hours should be secured.

English: The student should complete one year or the equivalent at the college level even though advanced credit has been received.

Mathematics: The student should take a one year course in calculus unless it has been taken in high school.

The Dental Admission Test

The Dental Admission Test is a requirement for admission to this school. It is administered in October, January and April. Preferably the test should be taken at least twelve months prior to the expected date of matriculation. Application blanks may be secured from the Division of Educational Measurements, Council on Dental Education, American Dental Association, 211 East Chicago Avenue, Chicago, Illinois, 60611.

Interviews and Faculty Evaluation

Appraisal of the applicant by members of his college faculty is an important part of the evaluation of each candidate. If the college has a pre dental or premedical advisory committee, their composite evaluation must be submitted. In the absence of such a committee two evaluation forms should be submitted by senior faculty members, at least one of whom should be in a science department. Interviews may be required of any applicant and may be arranged at places convenient to the candidate.

ADMISSION TO ADVANCED STANDING

The third year class may be increased by a small number of transfer students who have completed the equivalent of the first two years at the Harvard School of Dental Medicine. No students may transfer to the fourth year class without a special vote of the Faculty in each instance. Only students of high scholastic standing will be considered. Applicants holding a degree from a dental school not accredited by the American Dental Association will be required to take the Science Achievement Test administered through the Council on Dental Education of the American Dental Association. They must be recommended as promising candidates by the Dean of the school from which they come. Full credit for work done elsewhere will usually be allowed but in certain cases additional work may be required. Ordinarily such requirements can be completed during the summer recess preceding transfer.

ADMISSION FOR SERVICEMEN

The Harvard School of Dental Medicine welcomes inquiries regarding future applications from men who are now on active duty with the armed forces. The qualifications for admission remain essentially the same for veterans as for civilian applicants. Before the acceptance of a veteran can become final, the applicant will need to submit photostatic copies of discharge papers or similar evidence of honorable release. Where available the applicant should file also a copy of his "Separation and Qualification Record" on which is listed in detail his service record and training. If the Committee does not act favorably

on an application, certifications furnished by the applicant may be returned at his request.

For matters relating to veterans' affairs and not connected directly with the School of Dental Medicine, the applicant should feel free to write to Veterans' Affairs, Comptroller's Office, Holyoke Center, Cambridge, Massachusetts, 02138.

General Regulations

In order that the time of study shall count as a full year, students must register on the date specified. All students will be notified during summer recess of the exact time and place of registration.

A fee of \$25 is charged for late registration.

Every candidate for the degree, Doctor of Dental Medicine, at Harvard must be at least twenty-one years of age and of good moral character. He must have fulfilled the requirements for admission to the School, give evidence of having successfully completed a program equivalent to that required of students enrolled for their entire dental education at Harvard, and spend not less than one year in residence.

The degree of Doctor of Dental Medicine *cum laude* or *magna cum laude* may be given to students who have given evidence not only of general academic excellence, but also of original scholarship presented to an Honors Committee. The degree is also awarded, where appropriate, with honors for a thesis in a special field. Application for the degree, on a form provided by the Dean's Office, must be filed at that Office prior to April 1 in order for the student's name to be placed on the list of degree candidates at Commencement.

The academic progress of students is reviewed periodically by representatives of each department responsible for the students' education. Promotion from one year to the next is contingent upon the satisfactory completion of the required work for each year. In each course, when indicated, students will be informed by their instructors as early as possible when their work is unsatisfactory. Students required to withdraw or to repeat a year will be given the opportunity to appeal the decision to the Dean in writing within two weeks of the issuance of notice of formal action. A student whose progress is unsatisfactory at any time throughout the School year may be placed

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on probation, which can be removed only if the student demonstrates satisfactory improvement. A student on probation is not eligible for promotion or graduation.

The Faculty reserves the right to require the withdrawal of any student at any time when, in the opinion of his instructors, he is not competent to pursue his assigned course of study, or if the Faculty of Medicine determines that he is for any reason unfit to continue as a student in the School. In addition, any student who is absent without leave from scheduled courses for more than a total of 30 days during the academic year will be required to withdraw from the School.

A student may withdraw voluntarily from the School upon application to the Dean. Application for reinstatement by any student must be received in writing at least four months prior to the date of readmission and for favorable action must be approved by the Committee on Admissions. A leave of absence for a period up to one year may be granted to any student wishing to pursue independent study or who is required to serve in the military service.



Dormitory

Vanderbilt Halls, the student dormitory, has accommodations for 305 men and 20 women medical and dental students. The majority of the rooms are designed for one occupant, but there are also a number of suites for two or more persons. The price of rooms ranges from \$385 to \$800 for the 11-month academic year. Application forms for rooms in Vanderbilt Halls will be sent to all new students approximately four months before registration day. Students are permitted to re-engage their rooms for the following year by signing lease cards at the Medical School Dean's Office. The dormitory has squash courts and a gymnasium which are open to members of the teaching staff and students of the School of Dental Medicine and the Medical School. In addition the Schools have tennis courts and an outdoor exercise field.

The Schools own a parking lot for automobiles behind the hall. A small charge is made for this facility, and the Schools assume no responsibility for loss or damage to automobiles or other property left in the lot.

The dormitory dining hall is open for all members of the Schools. *First year students* living in Vanderbilt Halls will be required to pay *full board* for 15 meals a week throughout the academic year (\$840). Second year students living in Vanderbilt Halls will be required to pay full board in the first term (\$441) but in the second term compulsory meal contracts may be amended to provide for absence from lunch during the three clinic days of each week. A proportionate decrease in the full board rate will be made for the period involved.

Apartments for married students may be found close to the School. University housing in Cambridge is available for married students.

Student Health Service

The Harvard Medical Area Health Service at 275 Longwood Avenue supplies medical care to the students. The clinic is open daily except Saturday afternoons, Sundays and holidays from 8:30 A.M. to 5:00 P.M.; office hours for the physicians are 8:30 to 10:00 A.M. and 1:00 to 2:00 P.M. However, one of the staff is available during the day by appointment. For emergency care at night and on holidays, the Emergency Service of the Peter Bent Brigham Hospital is open at all times, and one of the staff of the Clinic is available by telephone.

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Dental students with minor illnesses requiring rest in bed, as well as more serious cases, will usually be hospitalized at the Peter Bent Brigham Hospital or the University Health Services at the Holyoke Center in Cambridge. Upon registration, each student receives a booklet which describes the medical services available under the Health and Medical Care Program for Students. Hospital insurance is available through the plan for wives and children of married students.

Any illness necessitating absence from classes must be reported to the Health Service.

Each student who is accepted for admission must submit, on a form supplied by the Dean's Office, a certified statement of successful vaccination within three years prior to registration. A complete medical examination of each new student is required at the beginning of the school year. This is conducted by appointment shortly after school opens.

Fees and Expenses

Ample scholarship and loan funds are available to cover all costs of dental education, when the need exists.

The fees are: — For matriculation, \$10; for medical health fees, \$130 for each year; for instruction (including laboratory charges except microscope rental, breakage, damage and loss of apparatus), \$2,500 for the 1971-72 academic year. Term bills are issued approximately every two months.

Microscopes are available for rental each year. During the third and fourth year, students rent a set of dental instruments from the School for a nominal fee, which may vary according to the value of the instruments. Dental students are not required to purchase instruments.

All indebtedness to the University must be paid by all candidates for degrees at least one day before Commencement.

Any student whose indebtedness to the University remains unpaid on the date fixed for payment is deprived of the privileges of the University until he is reinstated by consent of the Dean, after payment of all indebtedness. A fee of \$10 is automatically added to all bills which are unpaid by the due date. Students will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw.

Financial Aid

Harvard School of Dental Medicine is fortunate in having substantial financial assistance available to its students. Scholarships are awarded on the basis of academic excellence, financial need, or a combination of factors. Loan funds are available to all students who show suitable need and whose other financial obligations do not make it improbable that this loan will be repaid. Application for financial aid may be made at any time to the Office of Student Affairs.

SCHOLARSHIPS

JOANNA ALFORD BEQUEST (1785). Mrs. Joanna Alford. To be used for scholarships for those students who are under low and indigent circumstances.

LAWRENCE WILLS BAKER (1956). Friends of Lawrence Wills Baker, D.M.D. 1898. A scholarship for a student who has shown aptitude and interest in the field of orthodontics.

DWIGHT M. CLAPP (1926). Clara Josephine Clapp, in memory of her husband, Dwight M. Clapp, D.M.D. 1882. For the education of a male student born in Massachusetts, preferably one who has a college education or training of a classical character.

DENTAL SCHOOL ALUMNI SCHOLARSHIP (1937). Gift of the Class of 1912.

THOMAS ALEXANDER FORSYTH (1929). Thomas Alexander Forsyth. Scholarship to two deserving men, awarded continuously until they have completed the course.

GENERAL SCHOLARSHIPS. A portion of General University Funds is available for dental students. Recipients are chosen by the Committee on General Scholarships on the recommendation of the Dean.

HARVARD SCHOOL OF DENTAL MEDICINE NATIONAL SCHOLARSHIP (1960). Awarded to one or more members of each class entering the School of Dental Medicine. The selection of recipients is based on academic promise without reference to financial need. The amount of the stipend, however, is in proportion to the student's actual neces-

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sities, except that a certain minimum award is granted to all prize scholars. Each student accepted by the Committee on Admission is considered as a candidate for a National Scholarship. *An individual application cannot be made.* The prize scholarship is awarded for one year. If the student maintains a satisfactory record, the scholarship will be renewed annually.

HEALTH PROFESSIONS SCHOLARSHIP (1965). A scholarship established under the provisions of the Health Professions Educational Assistance Amendment of 1965. To be awarded to students from low-income families.

FRANK RANDALL McCULLAGH (1964). Bequest of F. R. McCullagh, D.M.D. 1902, to assist worthy and indigent students to finance themselves through their dental training.

LEONARD D. NATHAN SCHOLARSHIP (1968). The gift of friends of Dr. Leonard D. Nathan to establish a scholarship in his name for the benefit of future students at the Harvard Dental School or some similar recognition the committee might decide upon.

EUGENE HANES SMITH (1920). Alumni Association. To be awarded to a third or fourth year student who has been a student in regular standing during the first and second years.

DAVID F. SPINNEY FUND (1969). Established by a bequest from his sister, Ella F. Spinney, and the gifts of fellow alumni and friends in memory of David F. Spinney, D.M.D. 1899. The income to be used for purposes of scholarship or loan.

PETER E. STRAUSS (1922). Emily R. M. Strauss, in memory of her husband.

JOHN E. THAYER SCHOLARSHIP (1857). Bequest of John E. Thayer, the income to be paid to the best scholar having financial need in each school of Harvard University.

CLARENCE B. VAUGHN (1965). Bequest of C. B. Vaughn, D.M.D. 1897, to aid worthy and desirable students in acquiring and completing their education in dental medicine.

The Committee on General Scholarships administers the following preferential scholarships, which are available to all students in the University. Specific application must be made to the Dean's Office early in February, unless otherwise stated, for any one of these awards.

JOHN AUSTIN AMORY, CLASS OF 1907, SCHOLARSHIP FUND (1954). Gift of Roger Amory, Class of 1910, to establish "the John Austin Amory, Class of 1907, Scholarship Fund . . . to provide one or more scholarships for candidates for a degree in any college or graduate school of the University." Under certain conditions a grandson by male line of John Austin Amory, '07, may be entitled to the income.

BAXENDALE SCHOLARSHIP (1928). Bequest of Esther M. Baxendale. Preference: (1) descendants of Alan Bedford Hudson; (2) students of the name of Baxendale or Hudson; (3) students from Brockton or Bourne, Mass.

BRIGHT LEGACY (1880). Bequest of Jonathan Brown Bright. For descendants of Henry Bright, Jr., of Watertown, Mass., who bear the name of Bright, registered in any department of the University.

DANIEL A. BUCKLEY BEQUEST (1905). Bequest of Daniel A. Buckley of Cambridge, Mass. For needy and worthy graduates of Latin High and other public non-sectarian schools in Cambridge.

GODFREY L. CABOT, INC. SCHOLARSHIP FUND (1955). For scholarships and grants of "aid" for students in any department of the University. A son of an employee of Godfrey L. Cabot, Inc. or of its subsidiary and associated companies, who applies for aid or a scholarship, may be preferred in the awards from this fund.

MADAME MARGUERITE CARRIÈRE FELLOWSHIP FUND (1959). Residuary bequest of Louis A. Freedman in memory of his wife. The fellowship is to be awarded in alternate years to a graduate student at Harvard University for study in France and to a French graduate student for study at Harvard University. It is hoped that the aim of the American student in France will be to study the French traditions and attitude so as to better understand and explain the French reaction to the problems that concern both countries and that similar aim will guide the French student in America.

VICTOR EMANUEL CHAPMAN MEMORIAL (1957). Several donors. In memory of Victor Emanuel Chapman, A.B. 1913, killed in World War I. For a French youth (or youths) for study in any department of Harvard University. Applications should be made through the Institute of International Education, 800 Second Avenue, New York, New York 10017, before *February 1*. A student already enrolled at Harvard should, however, apply through the Dean's Office.

JOSEPH HODGES CHOATE MEMORIAL (1919). Gift of the Harvard Club

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of New York City in memory of Ambassador Joseph Hodges Choate, A.B. 1852. Awarded upon the nomination of the Vice-Chancellor of the University of Cambridge, England, to a British subject coming from that University to study in any department of Harvard University.

GEORGE CHASE CHRISTIAN MEMORIAL SCHOLARSHIPS (1936). Gift of Carolyn McKnight Christian in memory of her husband, George Chase Christian, A.B. 1895. To be awarded as National Scholarships to residents of Minnesota, for study in Harvard University, preferably the graduate schools.

MARK D. CORY SCHOLARSHIP (1954). Residuary bequest of Mark D. Cory. To be awarded to a worthy graduate of the Gadsden High School, Gadsden, Alabama, to be selected and designated by the faculty of said high school. Available for students in any department of the University.

CHARLES DOWNER SCHOLARSHIP FUND (1927). Bequest of Charles Downer, A.B. 1889, LL.B. 1892. For students in any department of the University in the following order of preference:

- A. Students of "English or Anglo-Saxon stock" who bear the family surname of Downer by right of birth or inheritance, and not because of adoption, preference to be given to such students who are descendants of Joseph and Robert Downer, of Wiltshire, England, who came to America about 1650. Scholarship awards under this category will be sufficient to pay for tuition, books, food, room and other incidentals in any academic year.
- B. Descendants of members of the Harvard College Class of 1889 who are in need of assistance.
- C. Residents of the State of Vermont, preference to be given to those most worthy of assistance.
- D. Students worthy of assistance and of high scholarship, preference to be given to (1) Descendants of graduates of Harvard College, and (2) Those "of that old Anglo-Saxon stock which has gone forth from New England into all parts of the United States and has been the means of giving strength and stability and character to our government."

Or, any balance of income remaining after the award of scholarships as specified in paragraphs A, B and C above may be used for fellow-

ships for Harvard graduates of high scholarship and of rare and unusual ability who are pursuing special work either at Harvard or at any American or foreign university or school.

DWIGHT D. EISENHOWER SCHOLARSHIP FUND (1962). Gift of William A. Hinton in memory of Augustus and Maria Hinton, "the income to be used in any department by way of scholarship grants, prizes for scholarly treatises or other achievements, or otherwise."

JEAN GAILLARD MEMORIAL FELLOWSHIP (1946). Established in memory of Jean Gaillard, a student of the Ecole Centrale des Arts et Manufactures in Paris, who served as an Aspirant in the French Air Forces, was arrested by the German Gestapo, and died in the German concentration camp at Ravensbrueck April 16, 1945, a victim of Nazi inhumanity. For French youths for study in any department of Harvard University or of the Massachusetts Institute of Technology. The incumbents from year to year are to be nominated by the Board of Directors of the Ecole Centrale des Arts et Manufactures in Paris.

LEWIS AND HARRIET HAYDEN SCHOLARSHIP FOR COLORED STUDENTS (1894). Residuary bequest of Mrs. Harriet Hayden. Open to colored students in the Medical School, the School of Public Health, and the Dental School.

CHARLES W. HOLTZER FELLOWSHIPS (1929). Bequest of Charles W. Holtzer. For young men of German birth who have received their preliminary education in German institutions of learning, to study in any department of the University. Preference is given to students in Germany at the time of application. Students in Germany may apply either through the Deutscher Akademischer Austauschdienst, Nassestrasse 11, Bonn, or the Institute of International Education, 200 Second Avenue, New York, New York 10017, *before December 1*. Students enrolled at Harvard should apply through their Schools. Documentary proof of German birth and education required.

FRANK KNOX MEMORIAL (1946). Gift of Annie Reed Knox in memory of her husband, Col. Frank Knox, LL.D. (Hon.) 1942, Secretary of the Navy, 1940-44. "It is my hope that this fund . . . will play a part in an integrated program of exchange fellowships throughout the world. The Frank Knox Memorial is established because of the firm belief of my dear husband, a conviction which I share, that cooperation between the British Commonwealth and the

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United States of America, based upon an informed and understanding contact of the peoples of these two great countries, is an essential to international peace." Candidates shall be selected on the basis of future promise of leadership, strength of character, keen mind, a balanced judgment and a devotion to the democratic ideal. Fellowships are awarded annually to:

1. Students coming from one of the following British Commonwealth countries: United Kingdom, Australia, New Zealand and Canada. Students should apply through their university *before November 1* of the year preceding award.
2. Recent graduates of Harvard College, or students who have completed at least one year of study in one of the Harvard graduate schools, for study in any one of the countries listed above.

LINCOLN SCHOLARSHIP (1876). Residuary bequest of Miss Levina Hoar. Preference: needy and worthy students from Lincoln, Mass.

FREDERICK E. PARLIN FUND (1928). Bequest of Albert Norton Parlin. Preference: natives of Malden or Everett, Mass.

WILLIAM PENNOYER BEQUEST (1670). Bequest of William Pennoyer of England, for two fellows and two scholars; one preferably to be a descendant of Robert Pennoyer (a brother of William) and the other . . . [from] . . . New Haven [Colony]. Preference to be given to undergraduate descendants. Pennoyer descendants in the graduate schools may apply for the Pennoyer Scholarship by filing such application directly with the College Admission and Scholarship Committee. Certified genealogical records required to establish claim.

ARISTIDES EVANGELUS PHOUTRIDES MEMORIAL (1925). Friends of Aristides Evangelus Phoutrides, A.B. 1911, Ph.D. 1915. Available for student of Greek birth or of Greek parentage in any department of the University.

PRINCETON FELLOWSHIP (1910). Gift of Cleveland H. Dodge. Preference: a graduate of Princeton University, for his first year of study only, in one of the graduate departments of Harvard University. Applications should be made to the Dean of the Graduate School of Princeton University before *January 20*.

LEON W. REDPATH SCHOLARSHIP (1938). Bequest of Mrs. Ellis W. Redpath in memory of her son, Leon W. Redpath, A.B. 1898. For deserving students from the state of Ohio, with preference to students from Stark and Tuscarawas Counties.

FRANKLIN REYNOLDS FUND (1925). Residuary bequest of John F. Reynolds. For students who are natives of Marblehead, Mass.

JAMES A. RUMRILL SCHOLARSHIPS (1909). Gift of Anna Chapin Rumrill in memory of her husband, James Augustus Rumrill, A.B. 1859. For a properly qualified graduate of a college or university in Virginia, North Carolina, South Carolina, Florida, Georgia, Tennessee, or Kentucky, who has been admitted as a first year student in one of the graduate departments of Harvard University.

PETER BROOKS SALTONSTALL '43 MEMORIAL (1947). Established by Senator Leverett Saltonstall in memory of his son, Peter B. Saltonstall. To assist a worthy student from the Hawaiian Islands and those islands west of Hawaii, including New Zealand, the Fiji Islands and Australia, and also Japan, South Korea, Hong Kong, Formosa, the Philippine Islands, Vietnam, the East Indies, Indonesian Islands, Sumatra and Thailand. The purpose of this memorial is to further the education, the health and welfare of the peoples inhabiting the above named regions of the far Pacific. Applications due *February 1*.

ERNEST FREDERICK SLATER SCHOLARSHIP (1955). Bequest of Ernest F. Slater. The income to be awarded as scholarships in any department of Harvard University to deserving (financially or otherwise) young men who are qualified residents of (a) the city of Orangeburg, South Carolina; (b) the state of South Carolina; preference to be given descendants by birth or adoption of Edward Frederick Slater regardless of their residence. No scholarship will be awarded to students in their first year at the University.

CHARLES H. SMITH BEQUEST (1947). Residuary bequest of Charles H. Smith. For awards to students in any department of the University according to the following order of preference:

1. a. Graduates of public high schools in Providence, Rhode Island, who are of scholarship rank.
- b. Graduates of public high schools in Providence, Rhode

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Island, who are below scholarship rank but who are considered eligible for financial aid.

2. Graduates of other (non-public) secondary schools in Providence, Rhode Island, who are of scholarship rank.
3. Any residents of Rhode Island not indicated above who are of scholarship rank.

WILLIAM STOUGHTON BEQUEST (1701). Bequest of Lieutenant Governor William Stoughton, A.B. 1650. Preference: (1) students from Dorchester or Mattapan, Mass.; (2) students from Milton, Mass.; (3) any needy and deserving student.

AUGUSTUS CLIFFORD TOWER (1927). Gift of Mrs. Augustus Clifford Tower. To be awarded annually to a French student for study in any graduate department of Harvard University and to a graduate of Harvard College who may be either a graduating senior or a student enrolled in one of the graduate departments of the University for study in a French university, preference to be given to a student of Anglo-Saxon descent.

JENS AUBREY WESTENGARD FUND (1954). Bequest of Rebecca Aubrey Westengard. "The income is to be applied . . . to the further education of students of promise and standing in any department of the University by providing them with facilities for further education in Europe, Britain or South America, by travel or study, or to the further education of students of promise and standing in any of those countries, by providing them with facilities for further education by travel and study in this country, preferably by study in some department of Harvard University."

1902 WORLD WAR MEMORIAL (1923). Gift of Class of 1902, in memory of their classmates, André Cheronnet-Champollion, Edward Ball Cole and Elbert Walker Shirk. Preference: deserving descendants of the members of the Class of 1902. Open to students in any department of the University, with preference to undergraduates.

The scholarships of the present are the result of the generosity and faith of members of a former generation. Current recipients of scholarships have an opportunity to render a service to future generations by refunding at some time after graduation a part or all of the scholarship money they have received.

LOAN FUNDS

AMERICAN DENTAL ASSOCIATION — FUND FOR DENTAL EDUCATION DENTAL STUDENT LOAN FUND (1962). Established by the Fund for Dental Education through a grant from the American Dental Association. Available without restrictions to incoming and enrolled students.

THE CHRISTIAN SOLDIER FUND (1925). Established by Miss Caroline F. Anderson for promising dental students. The loan carries no interest but the recipient must sign a note obligating him to repay the loan not later than five years from the date of the note.

DENTAL ALUMNI LOAN FUND (1927). Established and maintained by the Dental Alumni Association for financial aid to worthy students.

LUCINDA DAVIS FERNALD FUND (1936). A small fund, the gift of Adelbert Fernald, D.M.D. 1896, to be loaned to deserving New England-born students of good character.

HEALTH PROFESSIONS STUDENT LOAN FUND (1963). A fund established through a matching Federal contribution under the provisions of the Health Professions Educational Assistance Act of 1963.

INTERNATIONAL COLLEGE OF DENTISTS (U.S.A. SECTION) STUDENT LOAN FUND (1962). A revolving loan fund established by the U.S.A. Section of the International College of Dentists to help meet the needs of senior dental students.

ROBERT T. MOFFATT FUND (1925). A small fund from various contributors in memory of Robert T. Moffatt, D.M.D. 1895, for the benefit of needy and deserving students.

SCHOOL OF DENTAL MEDICINE LOAN FUND (1953). An appropriation from the School's funds to establish additional loan money for needy students.

SCHOOL OF DENTAL MEDICINE REVOLVING LOAN FUND (1952). Recognizing the need for student loan money in the School, the President and Fellows of Harvard College authorized an appropriation to establish this fund.

DAVID F. SPINNEY FUND (1969). Established by a bequest from his sister, Ella F. Spinney, and the gifts of fellow alumni and friends in memory of David F. Spinney, D.M.D. 1899. The income to be used for purposes of scholarship or loan.

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Loans shall bear no interest until July 1 one year after the borrower's graduation from the school. Thereafter, Health Professions Student loans shall bear interest at the "going Federal rate" in effect at the time the loan was made. For the fiscal year, 1971-72, this rate has been set at 3 per cent. Any change in the rate will be announced annually on or before July 1. Other Harvard loan funds carry a 6 per cent simple interest rate.

The principal and interest are to be repaid over the ten-year period that begins three years after graduation from the School. The period of payment may be deferred for three years of military service and/or three years in the Peace Corps.

Payment may be made in equal or graduated installments with the right of the borrower to accelerate payments.

If the student borrower leaves the School prior to graduation, the interest on his loan shall begin to accrue on the date of his separation from the School.

STUDENT EMPLOYMENT

A limited amount of outside work can be done without taxing the student's health and scholarship. The Dean's Office makes an effort to assist students in obtaining part-time work during the college year and full-time work during the summer vacation.

Prizes

HARVARD DENTAL ALUMNI PRIZES (1953). The Harvard Dental Alumni Association annually makes several awards for scholastic excellence.

HARVARD ODONTOLOGICAL SOCIETY (1949). The Harvard Odontological Society each year presents a Certificate of Merit to the best Senior Seminar Essayist of that year. This senior is selected by the Awards Committee of the School of Dental Medicine.

DR. GRACE MILLIKEN (1950). An award given annually when practicable, but at least once in three years, for an outstanding essay on the general subject of dental health.

OPPORTUNITIES FOR POSTDOCTORAL EDUCATION

**At the School of Dental Medicine, Forsyth Dental Center,
and other Affiliated Institutions**

I. ADVANCED DEGREE PROGRAMS

A. DOCTOR OF MEDICAL SCIENCES IN ORAL BIOLOGY

The goal of this degree program is to develop clinical scholars in oral biology in the research and educational environment of Harvard University, its affiliated hospitals, and the Forsyth Dental Center. The program is planned exclusively for individuals who are preparing for full time academic careers in dental schools and research institutes. The design of the program is uniquely flexible to adapt to the needs of each trainee and will enable him to develop 1) depth in those scientific disciplines necessary to permit original, creative investigation of problems in oral health; 2) competence in oral biology as an interdisciplinary area of knowledge; and 3) a research problem under the guidance of a sponsor and thesis committee which will culminate in a thesis and its defense. Requirements of this degree program should ordinarily be completed in three calendar years, with approximately one year devoted to course work and two years in research and thesis preparation. Students in dental or medical schools with one or more semesters of elective time may be eligible to enroll as predoctoral students in this program and take courses credited toward this degree. The Faculty of Medicine of Harvard University will award the degree Doctor of Medical Sciences in Oral Biology for the satisfactory completion of the above requirements.

In addition, each degree candidate may elect to participate in advanced education in a clinical specialty leading to eligibility for a specialty board. It is anticipated that most candidates will desire specialty training in one of the several clinical departments at Harvard which offer graduate education to prepare for appointments as faculty members in clinical dentistry departments. The appropriate amount of time necessary for the clinical training will be in addition to that required for the degree program. The design of the combined degree-specialty training programs will be developed for each candidate independently in order to arrive at the schedule which will best suit his needs and result in optimal utilization of time for his research and clinical programs.

Stipends are available for personal support, tuition and medical fees during both the degree and clinical portions of this program under

the auspices of the Training Center for Clinical Scholars in Oral Biology, funded by the National Institute for Dental Research.

Individuals interested in the program for the degree Doctor of Medical Sciences in Oral Biology, with or without clinical specialty training, should request the brochure describing this program in detail and application forms from the Director of Postdoctoral Education, Harvard School of Dental Medicine, 188 Longwood Ave., Boston, Massachusetts 02115. The area of probable clinical interest should be indicated in this inquiry.

B. DOCTOR OF PHILOSOPHY

Candidates who are interested in full-time careers of teaching and research in basic and behavioral sciences in dental schools and institutes might elect to prepare by advanced study and investigation toward the Doctor of Philosophy. This degree is administered by the Graduate School of Arts and Sciences through the Division of Medical Sciences. Candidates for this degree must hold a degree in Arts or Sciences from an approved college or may matriculate after completion of the requirements for the degrees, Doctor of Medicine or Doctor of Dental Medicine. The degree of Doctor of Philosophy may be taken in Anatomy, Biological Chemistry, Biophysics, Cellular and Developmental Biology, Microbiology, Neurobiology, Pathology, Pharmacology and Physiology. In addition opportunities are available to obtain the Doctor of Philosophy in Anthropology, Psychology, Sociology, etc., directly through the Graduate School of Arts and Sciences.

Ordinarily three or more years are required for the completion of formal courses and thesis preparation. The thesis must show rigorous treatment of a fitting subject, give evidence of independent research and be clearly, logically and carefully written. Following acceptance of his thesis, the candidate is given an oral final examination on the subject of his thesis and its relation to his special field and collateral subjects.

Students interested in graduate study toward the degree, Doctor of Philosophy in a basic medical science should obtain the pamphlet "Higher Degrees in Medical Sciences" and application forms from the Admissions Office, Graduate School of Arts and Sciences, 75 Mt. Auburn Street, Cambridge, Massachusetts 02138. A small number of stipends will be available from the Training Center for Clinical Schol-

ars in Oral Biology for students who are working toward this degree in one of the above fields with a minor in Oral Biology.

II. THREE-YEAR POSTDOCTORAL FELLOWSHIPS FOR RESEARCH AND ADVANCED CLINICAL PROGRAMS

The three-year Postdoctoral Fellowship Programs have been designed for young dental graduates of high scholastic ability and promise who are planning full-time careers in academic dentistry, and who prefer a program with fewer course requirements and without a degree. At present programs are available in Dental Public Health, Endodontics, Orthodontics, Pediatric Dentistry and in Periodontology and Oral Medicine. Programs are being developed in other specialties. All programs combine research, teaching and patient care under the guidance of a research and a clinical sponsor and satisfy the educational requirements of various specialty boards. Flexibility is the keynote in the planning of the fellow's advanced training with minimum formal course requirements. However, where indicated, arrangements have been made for the fellows to take appropriate courses at the various schools of Harvard University and its affiliated institutions and at other universities in Greater Boston. Every effort is made to select a research project and a sponsor for the trainee which would provide him with fundamental tools for future development of his research interests. At the end of the three-year program, each fellow is required to submit an original report based on his research project and defend it before a faculty committee. This requirement demands pursuit of a problem in depth and the ability to describe the problem and findings in detail. Upon successful completion of the various requirements, a Postdoctoral Fellowship Certificate is awarded.

The program in Dental Public Health has some variations from the above generalizations to meet the requirements of the American Board of Dental Public Health. The first year is spent at the School of Public Health working towards the degree of Master of Public Health with elective studies at the School of Dental Medicine. The second year involves residency training in cooperation with the Massachusetts Department of Public Health. The third year continues the residency experience but includes advanced didactic work and research training at the School of Dental Medicine, the preparation and defense of an original report, and teaching experience.

Stipends are available from different sources to support candidates in these three year programs. Individuals interested in any of these educational programs should indicate their area of clinical interest and request further information and application forms from the Director of Postdoctoral Education, Harvard School of Dental Medicine, 188 Longwood Ave., Boston, Massachusetts 02115.

III. TWO-YEAR CLINICAL TRAINING PROGRAMS

In certain clinical areas opportunities are available for training which satisfy the educational requirements of the various specialty boards for those whose major goal is clinical practice and teaching. Currently programs are available in Dental Public Health, Endodontics, Orthodontics, Pediatric Dentistry and in Periodontology and Oral Medicine. Programs in other specialties are being developed.

This training is aimed at providing the basic information as well as instruction in patient care and extensive opportunity for practice and patient management which would enable the trainee to enter specialized practice. During the two year period the trainee has opportunities in various educational settings throughout the area, to participate in teaching, research, rounds, seminars, lectures and clinics.

Since the financial and educational details of each program vary, applicants should address requests for detailed information to the chairman of the appropriate Clinical Department at the School of Dental Medicine.

IV. INTERNSHIPS AND RESIDENCIES

Opportunities for internships and residencies are available in various institutions affiliated with the School of Dental Medicine. These positions are for qualified dental school graduates who meet the requirements of the individual institutions and are administered by these institutions. While interns and residents are appointed by and responsible to the institution in which training is carried out, they may take advantage of courses presented in the School of Dental Medicine as their institutional commitments allow. Residents usually hold teaching appointments within the School.

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The current opportunities in this area are as follows:

a) *Pediatric Dentistry:*

Annual appointments are available for two interns in the Dental Department at the Children's Hospital Medical Center (a Harvard teaching unit staffed full time by the members of the Department of Pediatric Dentistry). Two residencies are available with preference given the incumbent interns. The residency year allows time for clinical research and advanced course work in the Harvard Medical Area as well as teaching experience with predoctoral students. The residency following internship completes the training required of the American Board of Pedodontics for examination of candidates for the diploma.

Application forms and additional information may be obtained by writing the Chief of Service, Dental Department, Children's Hospital Medical Center, 300 Longwood Ave., Boston, Massachusetts 02115.

b) *Oral Surgery:*

The Department of Oral Surgery at the Massachusetts General Hospital is staffed by members of the Oral Surgery Department of the School of Dental Medicine. Oral surgical house officers are selected annually for a three-year training program. The house staff consists of two interns and four residents. The three-year training period is an integrated one during which the basic science as well as clinical requirements for American Board of Oral Surgery eligibility are fulfilled. The program is designed to include rotation through other services such as, Pathology and Anesthesiology, for periods ranging from two to four months. Additionally, the resident staff participates in teaching second, third and fourth year dental students both at the hospital and the School of Dental Medicine.

House officers are encouraged to become involved in investigative work. Since little time is available during a clinical training program to do research with appropriate thoroughness, elective periods are willingly granted for research in laboratories at the hospital or elsewhere. It is the intent of the Oral Surgical Service to encourage and develop both well-trained practicing oral surgeons and clinical scientists who will pursue academic careers.

Application forms and additional information may be obtained by writing the Chief of Service, Department of Oral Surgery, Massachusetts General Hospital, Boston, Massachusetts 02114.

V. CLINICAL TEACHING FELLOWSHIPS

The Special Clinical Training Fellowship may be a one, two or three year program directed to the graduate dentist who wishes to aim his career to full or part time teaching in a clinical dental discipline. The graduate students are introduced to both didactic and clinic teaching in the area of their choice. Presently, teaching fellowships are offered in the areas of Crown and Bridge, General Dentistry, Periodontology, Prosthetics and Operative Dentistry. Under the supervision of a sponsor each clinical teaching fellow is required to prepare and present lectures, technique demonstrations and patient treatments for teaching of the dental students during their Principle Clinical Year. In addition he is assigned to attend and present critiques of certain lectures and demonstrations. The participant is required to familiarize himself with the use of teaching aids and participate in curriculum discussions in his chosen field. Clinical fellows are required to attend and participate in the weekly postdoctoral seminar program and are encouraged to make full use of all the available facilities offered at Harvard University.

The opportunity is afforded to participate in teaching during the undergraduate dental externships at the associated hospitals and dental institutions. Throughout the program the graduate student participates in patient care and treatment in the Special Services Clinics concentrating in his area of major interests. Research participation is encouraged, but is not a requirement. At the conclusion of the prescribed course the successful candidate is awarded a certificate from the clinical teaching fellowship program.

Inquiries and requests for application forms should be addressed to the Director of Postdoctoral Education, Harvard School of Dental Medicine, 188 Longwood Ave., Boston, Massachusetts 02115.

VI. PROGRAMS FOR POST-DOCTORAL TRAINING IN RESEARCH

There are numerous opportunities for advanced research training at the post-doctoral level at the Harvard School of Dental Medicine and its affiliated institutions. Such training would be undertaken in the laboratory of a specific research sponsor in the basic medical sciences, in oral biology, in public health or in the behavioral or social sciences. Positions are available for periods of one to three years and are open

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to candidates already holding doctoral degrees in Dental Medicine or Dental Surgery, Medicine, Philosophy or Science, and Medical Sciences or their equivalents. Candidates ordinarily apply for fellowship stipends from agencies outside the university; however, some laboratories or sponsors offer direct stipend support. A list of potential sponsors and their fields of research can be obtained by writing Director of Postdoctoral Education, Harvard School of Dental Medicine, 188 Longwood Ave., Boston, Massachusetts 02115. Please include your curriculum vitae, bibliography and a description of your career goals.

VII. SPECIAL PROGRAMS

Opportunities exist at the Harvard School of Dental Medicine for individuals with special training or interests who wish to pursue in depth areas not clearly demarcated in any one of the above programs. Such diverse opportunities might include, for example, further training and experience in interdisciplinary areas such as bioengineering, technological aids in dental education and programs in the delivery of dental care. Address inquiries to Director of Postdoctoral Education, Harvard School of Dental Medicine, 188 Longwood Ave., Boston, Massachusetts 02115. Please include a curriculum vitae, bibliography and detailed description of training needs and long range goals.

HIGHER DEGREES IN THE MEDICAL SCIENCES

The degrees Doctor of Philosophy and Master of Arts have been established for advanced work in special fields in the medical sciences. These degrees are administered by the Faculty of Arts and Sciences, through the Division of Medical Sciences, which consists of faculty members of the preclinical departments of the Faculty of Medicine.

Those who already hold a dental or medical degree are encouraged to obtain their additional education as postdoctoral fellows (see pp. 46-47), although they may become candidates for advanced degrees if their qualifications for admission are approved and if they are prepared to fulfill such formal course requirements as may be decided by the Division. Students interested in graduate study in the Division should see the General Announcement of the Graduate School of

Arts and Sciences and the pamphlet "Higher Degrees in Medical Sciences", available from the Harvard Graduate School of Arts and Sciences, Cambridge, Massachusetts 02138. Inquiries should be addressed to the Chairman of the Division of Medical Sciences, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts 02115.

THE MAJOR ALTERNATE PATHWAYS FOR STUDENTS IN THE SCHOOL OF DENTAL MEDICINE*

Pathway	Year	1	2	3	4	5	6	7	8
			3 required years of basic medical sciences, clinical disciplines & hospital experience		Elective year				
1					Upper level basic science courses, clinical experience, research or a combination				
2					Required courses at Harvard School of Public Health				
3					Two year specialty training; primary clinical emphasis with research component				
4					Three year certificate program with thesis; approximately 1/2 clinical and 1/2 research				
5					Doctor of Medical Sciences (Oral Biology) approximately 1 year course work and approximately 2 years research and thesis preparation				
6					Doctor of Medical Sciences (Oral Biology) approximately 1 year course work and approximately 2 years research and thesis preparation				
7					Doctor of Philosophy in Basic Science Disciplines by Division of Medical Sciences				

* These times are hoped for and expected predictions for normally progressing students. Appropriate extensions will be required when students enter the postdoctoral training period with deficiencies when research takes longer then expected, or when additional clinical experience is required by specialty boards.

Announcement of Courses

Division of Studies for the Basic Medical Sciences

FIRST YEAR		SECOND YEAR	
	HOURS		HOURS
Orientation	50	Human Biology III	
Cellular and Molecular Biology		Hematology	82
Cellular Biochemistry	101	Gastrointestinal	88
Behavioral Science	61	Infection	131
Biostatistics	12	Endocrine — Reproduction	73½
Bacteriology	22	Examination of the Patient ..	96
Correlation Clinics	28	Tutorial	36
Embryology	1		
Histology	74		
Immunology	6		
Pathology	48		
Pharmacology	10		
Physiology	13		
‡Human Biology I			
Growth	50		
Circulation	83		
Respiration	48		
Renal	46		
Epidermal and Supporting			
Tissues	56		
Gross Anatomy	154		
Behavioral Science	12		
‡Human Biology II			
Neurosciences	118		
Tutorial	36		

‡ A multidepartmental integrated course.

Descriptions of courses for the first and second years are abridged. See combined catalogue of the Harvard Medical School and School of Dental Medicine for further particulars.

General Plan of the First Year and One-half

CELLULAR AND MOLECULAR BIOLOGY

In September, 1968, the first year of a new curriculum was inaugurated. Following an orientation week, the first semester begins with Cellular and Molecular Biology. The aim of the first semester is to provide the entering student with an introduction to the scientific basis of medicine. Subjects previously taught over the first one and a half years are presented in a "core" curriculum during the first semester; the subject matter reduced to those essentials the Faculty thinks every dental student should know. There is abundant opportunity and time to expand on this material during subsequent required and elective courses. Considerable "free time" has been included in each week to allow the student opportunity to pursue his own studies. Clinics are scheduled frequently, during the teaching of Biochemistry, Histology, Embryology, Bacteriology and Immunology, Pharmacology, Physiology, and Biostatistics to illustrate the clinical relevance of these subjects. In addition a weekly seminar and field experience provides an introduction to the increasingly important role of the behavioral sciences in medicine.

HUMAN BIOLOGY

The course in Human Biology covers a full year and is designed to extend the student's knowledge of the scientific basis of medicine from the level of the cell to that of the tissues, the organs and the organism as a whole. It represents a coordinated teaching effort on the part of the various preclinical and clinical departments and includes large segments of material originally taught as parts of separate courses in histology and embryology, physiology, pathology, pharmacology and pathophysiology. The course presents a survey of the structure and function of the different organ systems in health and disease, building upon the basic material introduced in the first semester. In the case of each system, both the normal anatomy and physiology and the pathology and pathophysiology of the various disease states are introduced in a common context which promotes a more relevant

education experience. A special effort is also made to provide close correlation between structural and functional changes in disease and to provide, whenever possible, an understanding of the ways in which these changes become manifest at the clinical level. In order to further this effort, extensive use is made of clinical and patient-oriented laboratory exercises and conferences.

The course is divided into three sections with Human Biology I occupying the second semester of the first year. This portion is introduced by a section on Growth (3 weeks) which includes aspects of human genetics, embryologic development, normal and abnormal cellular growth and differentiation, neoplasia and radiation biology. During this period of transition from cell to organ biology, the student also begins the study of Gross Anatomy which continues throughout the semester. The section on Growth is followed by sections on Heart and Circulation (5 weeks), Respiration (2½ weeks), Renal (2½ weeks) and Epidermal and Supporting Tissues (3 weeks). Each of these subjects is taught by multidepartmental groups of teachers permitting discussion of subject material from several points of view. This approach not only permits the student to appreciate the contribution of the various disciplines to the study of disease in man, but also enables him to benefit from the special knowledge and skills that each brings to bear on scientific and clinical problems. A series of lectures on Behavioral Science — now concerned with psychopathology — are also given during this semester.

Human Biology II occupies a six and one half week period from early June through the middle of July, and deals in an integrated fashion with the organization and function of the human nervous system in health and disease. The essential framework of the course is a survey of the anatomical arrangement of the major nuclear groups and tracts of the human spinal cord and brain, presented by members of the Department of Anatomy. Selected topics in neurophysiology, ranging from basic synaptic properties, through peripheral and central motor mechanisms, central visual and somatosensory functions, to complex normal activities such as sleep and the use of language, are presented by members of the Department of Neurobiology, supplemented with contributions from the Departments of Neurology and Psychiatry. Since our present knowledge of the organization of the human nervous system has come largely from the study of disease, and since the fundamental aim of the core curriculum is to provide

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a basis for clinical training, members of the Department of Neurology and Neuropathology survey the major categories of pathological processes affecting the nervous system, emphasizing the correlation of anatomical locus with physiological expression of disease. Members of the Department of Pharmacology present those principles of pharmacology, illustrated by agents affecting the nervous system. Their major emphasis is given to anesthesia, analgesia, and behavioral pharmacology. Numerous laboratory sessions, conferences, and clinics supplement the lectures throughout the course.

Human Biology III, which will occupy the fall semester of 1969, will include sections on Hematology, the Gastrointestinal System, Infection, and the Endocrine-Reproductive System. New blocks, such as that on Infection, will allow medical bacteriology, immunology, epidemiology, and parasitology to be drawn together and presented in a coordinated relevant manner. Practical instruction in the taking of case histories and physical examinations, will be given during this semester.

ANATOMY

DON W. FAWCETT, M.D., *Hersey Professor of Anatomy, James Stillman Professor of Comparative Anatomy, and Head of the Department.*

ANATOMY A AND B. *First Year.*—There are no required courses in anatomy as such. Selected topics in cytology and histology are included in the required course called Cell Biology in the first semester. An introduction to gross human anatomy and neuroanatomy are offered in the required integrated course in the second semester called Human Biology.

In the study of gross anatomy, groups of four students carry out a cursory dissection of the human body intended to familiarize them with the descriptive terminology and topographical relations of the organs and with certain principles of organization of the circulatory, nervous, and musculo-skeletal systems. There are lectures and demonstrations which serve to emphasize the clinical applications of a knowledge of gross anatomy. Special dissections, specimens and ciné-prosections are displayed to supplement the students' own dissections.

Histology is no longer offered to medical students as a separate course. However, certain elements of microscopic anatomy are incorporated in the integrated course in Cell Biology offered in the first

semester. This instruction is intended to give the student some familiarity with the normal structure of cells and certain of the tissues as they appear with the light microscope and with their finer structure as revealed by electron microscopy.

The histology of several organ systems not covered in the first semester is presented in the various blocks in the Human Biology course of the second semester of the first year and the first semester of the second year.

A few lectures in embryology are offered in the Growth Block of the integrated Human Biology course in the second semester of the first year.

Neuroanatomical instruction is given as part of a block of correlative teaching called Neurosciences in the second semester of the first year.

DRS. FAWCETT, PALAY, EDWARDS, HAY, SZABO, ITO, SOROKIN, MANASEK, HAMILTON, MOREST, and WATERMAN.

Lectures, demonstrations, and lab.

BIOLOGICAL CHEMISTRY

ELKAN R. BLOUT, PH.D., A.M. (*hon.*), *Edward S. Harkness Professor of Biological Chemistry and Head of the Department.*

BIOLOGICAL CHEMISTRY. First Year.—During the first semester the lectures and conferences in Biological Chemistry discuss the chemical components of living matter and the metabolic processes common to all tissues. Laboratory work deals with the physical and chemical concepts necessary to an understanding of living processes, and the fundamental chemical characteristics of biological compounds and enzymatic reactions.

DRS. ALPERS, BALL, BETHUNE, BLOUT, CAPECCHI, CHADER, COLMAN, COMB, EICHBERG, JR., ENGEL, FOLCH-PI, GERGELEY, HARPER, HAUSER, JEANLOZ, KALCKAR, KARNOVSKY, KENNEDY, KNOX, LIN, MEIENHOFER, MOKRASCH, ORR, PAULUS, RICHARDSON, RIEDER, RIORDON, ROBINSON, SANADI, SIMONS, SPIRO, STOFFYN, SWANN, THOMAS, VALLEE, VILLEE, WALLACH, and YOUNG.

Lectures, demonstrations, and lab.

PHYSIOLOGY

THOMAS H. WILSON, M.D., DR. PHIL., A.M. (hon.), *Professor of Physiology and Head of the Department.*

PHYSIOLOGY. *First Year.* — As a part of the first semester's course in Cell Biology the students are exposed to some principles of cell physiology given in six lectures and five conference hours. Topics covered include membrane permeability, osmotic properties of cells, diffusion and active transport. These principles are illustrated in various mammalian cells. Active and passive transport of ions are discussed with special reference to nerve resting potential and action potential, ionic basis for synaptic transmission.

During the second semester, the Department of Physiology participates in the teaching of Human Biology I and II. (See page 54)

DRS. BARGER, BERLIN, FENCL, GOLDBERG, GOLDSTEIN, GOODMAN, HENNEMAN, HERD, HOUK, PAPPENHEIMER, SOLOMON, and WILSON.

Lectures, demonstrations, and lab.

BACTERIOLOGY

HAROLD AMOS, PH.D., *Professor of Bacteriology and Immunology and Head of the Department.*

BACTERIOLOGY. *First Year.* — Bacterial Physiology, Microbial Genetics and Introduction to Immunology. The Bacteriology Department offers lectures (21-24) and laboratory as part of the Cell Biology Course in the Fall semester of the year. The block consists of an introduction to bacteria, mycoplasma and viruses, including the structure, physiology, metabolism, and genetics principally of bacteria. The mechanisms of action of the principal antibacterial antibiotics are discussed in some detail. The introduction to immunology is coordinated with the teaching of general pathology at the end of the first semester.

DRS. AMOS, GIBBONS, SOCRANSKY, and Staff.

Lectures, laboratory work, and conferences.

PATHOLOGY

MORRIS J. KARNOVSKY, B.Sc., *Professor of Pathology and Head of the Department.*

DAVID G. FREIMAN, M.D., *Professor of Pathology at the Beth Israel Hospital.*

PATHOLOGY. (Cell Biology — General Pathology). *First Year.* — This course in Pathology consists of lectures given by the staff on disease at the cell level, inflammation, circulatory disturbances, and immunologic injury. It also includes laboratory study of pathologic histology and demonstrations of gross pathologic material, partly as fixed specimens, but more extensively as demonstrations of fresh autopsy and surgical material brought from laboratories of the affiliated hospitals. The material in this course is coordinated with what is being taught concurrently in Histology and Immunology.

Dr. M. J. KARNOVSKY and Associates.

Lectures and laboratory work.

PATHOLOGY. (Human Biology I). *First Year.* — The pathology of tumors together with many aspects of special pathology involving the circulatory, respiratory, renal, epidermal and skeletal systems are taught in conjunction with the other first year courses and designated as Human Biology I. The initial section on *Growth* (3 weeks) comprises an introduction to embryology and human genetics as well as an overview of neoplasia (etiology, epidemiology and pathogenesis of tumors), and the main features of cellular radiation biology. This is followed by a section on the *Circulation* (5 weeks) concerned with the normal and pathologic anatomy and physiology of the heart and blood vessels, a section on *Respiration* (2½ weeks) concerned with normal and abnormal pulmonary function and gas exchange, one on *Kidney* (2½ weeks) concerned with normal and abnormal renal function and the problems of acid-base balance, and a final section on *Epidermal and Supporting Tissues* (3 weeks) concerned with skin, bone and the connective tissues. Pathology teaching in all these sections includes laboratory exercises, frequent demonstrations of gross and microscopic pathologic material and lectures by various staff members, often in conjunction with physiologists, pharmacologists, clinicians and radiologists. In addition, numerous conferences and

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clinics are designed to help the student understand the relation between structure and function, the pathological background of various disease states and the fundamentals of clinico-pathological correlation.

NEUROBIOLOGY

STEPHEN W. KUFFLER, M.D., *Robert Winthrop Professor of Neurobiology and Head of Department.*

NEUROBIOLOGY. *First Year.* — Lectures and conferences given in collaboration with the Departments of Anatomy, Neuropathology, Pharmacology and Physiology. Three lectures on the ionic basis of nerve cell activity are given in the Cell Physiology section of the first semester. Further lectures on synaptic transmission, neurochemistry and integrative activities are given in Human Biology II at the end of the first year. The importance of the cellular connections is emphasized both from physiological and anatomical points of view; certain well-studied systems are considered in detail.

Drs. KUFFLER, HUBEL, FURSHPAN, POTTER, and Associates.

Lectures and conferences.

NEUROPATHOLOGY *A.* — The course, consisting of lectures, laboratory work, and demonstrations, is now part of Human Biology II. The lectures introduce concepts of value in neurology and psychiatry. Microscopical and gross specimens are studied.

PHARMACOLOGY

DOUGLAS R. WAUD, M.D., DR. PHIL., *Associate Professor of Pharmacology and Acting Head of the Department.*

ARMEN H. TASHJIAN, JR., M.D., *Professor of Pharmacology in the School of Dental Medicine.*

REQUIRED COURSE

PHARMACOLOGY. *First Year.* — The course in pharmacology has become an integral part of the sections on Cell Biology, Human Biology I, Human Biology II, and Human Biology III, which take place in the first semester of the first year, second semester of the first year, June and July of the first year, and fall semester of the second year respec-

tively. In the Cell Biology area there is a brief introduction to general principles of pharmacology including a discussion of uptake and distribution of drugs, interaction of drugs and receptors, principles of drug metabolism, etc. In the cardiovascular section of Human Biology I, pharmacology of the autonomic nervous system and of drugs acting on the cardiovascular system are discussed both with regard to the pharmacology of the agents involved and to illustrate the method of approach to the analysis of drug action. In Human Biology II (Neurosciences) there are 12 half days in which topics such as general anesthesia, action of drugs in behavior, use of drugs to modify pain, etc., are discussed. During this period, topics such as the action of drugs on the autonomic nervous system are reviewed and consolidated. Finally there are groups of lectures on specific classes of agents (for example, diuretics, drugs acting in the gastrointestinal tract, etc.) which are discussed as an integral part of the organ-oriented approach to specific areas such as biology of the kidney or of the gastrointestinal tract.

The format of the course is principally that of a lecture course supplemented with demonstrations, laboratory exercises, and small group conferences, where appropriate. This introductory course does not run as a distinct entity with a separate regular schedule. Lectures, etc., are scheduled as much as possible to relate to the general first and second year medical curriculum. Therefore, to obtain dates and times of lectures, etc., consult the general first and second year Harvard Medical School schedules.

Dr. WAUD and Staff.

Lectures, laboratory work, and conferences.

CLINICAL PHARMACOLOGY. *Clinical Core*.—Lectures and practical demonstrations concerning the use and prescription of drugs and other biologically active agents important in dentistry. Topics covered include new drugs (evaluation and certification), narcotics regulations, treatment of dental patients receiving medical care, and prescription writing. In addition, the following subjects are presented and discussed: antibiotics and chemotherapy of microbial diseases, emergencies in dental practice, analgesics, local anesthetics and general anesthetics, and behavioral aspects of drugs affecting the central nervous system.

Dr. TASHJIAN and others.

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PHARMACOLOGY 212. ENDOCRINOLOGY

Half course (Spring term). Lectures and conferences. Hours to be arranged. Professor A. H. TASHJIAN, JR. and others.

Course given in alternate years.

Lectures on the historical development and current state of knowledge of the pituitary gland and its hormones, control of pituitary gland function by the hypothalamus, and interrelationships between the pituitary, its target glands, and their hormones will be discussed in detail. Students will participate in conferences and presentations of assigned reading in the original literature.

MEDICINE

ALEXANDER LEAF, M.D., A.M. (*hon.*), *Jackson Professor of Clinical Medicine and Chief of Medical Services at the Massachusetts General Hospital.*

JAMES H. JANDL, M.D., *George Richards Minot Professor of Medicine and Head of the Department at the Boston City Hospital.*

HOWARD H. HIATT, M.D., *Herrman Ludwig Blumgart Professor of Medicine and Head of the Department at the Beth Israel Hospital.*

GEORGE W. THORN, M.D., LL.D. (*hon.*), SC.D. (*hon.*), DR. OF MED. (*hon.*), *Hersey Professor of the Theory and Practice of Physic and Head of the Department at the Peter Bent Brigham Hospital.*

DAVID P. LAULER, M.D., *Assistant Professor of Medicine at the Peter Bent Brigham Hospital.*

MEDICINE A. *Second Year.* — Accompanying the instruction in Human Biology III, a course is given in the study of the patient by history taking and physical examination. For this instruction, the students are divided into small groups and assigned to the four general hospitals. Case taking and physical diagnosis. Dr. LAULER and Staff.

SURGERY

WILLIAM V. McDERMOTT, JR., M.D., *Professor of Surgery and Head of the Department at the Boston City Hospital.*

FRANCIS D. MOORE, M.D., *Moseley Professor of Surgery and Head of the Department at the Peter Bent Brigham Hospital.*

DENTAL MEDICINE

WILLIAM G. AUSTEN, M.D., *Professor of Surgery and Head of the Department at the Massachusetts General Hospital.*

WILLIAM SILEN, M.D., *Professor of Surgery and Head of the Department at the Beth Israel Hospital.*

SURGERY. Second Year — The course is designed to introduce the student to the skills of case taking and to correlate pathophysiology and the manifestations of injury and disease. The Department of Surgery joins with the Department of Medicine to offer a unified program of instruction in the clinical setting to meet this goal.

Case taking and demonstration — clinics relating to physical diagnosis of the patient, in conjunction with the Department of Medicine.

Drs. McDERMOTT, MOORE, SILEN, and Associates.

PREVENTIVE MEDICINE

DAVID D. RUTSTEIN, M.D., *Ridley Watts Professor of Preventive Medicine and Head of the Department.*

QUANTITATIVE METHODS IN MEDICINE. First Year. — Instruction in Quantitative Methods in Medicine is tailored to meet the mathematical and statistical background, the needs and the career aspirations of the individual student. Three simultaneous courses are given: Introductory Biostatistics, Intermediate Biostatistics, and Introductory Biomathematics. To be eligible for admission to the courses in Intermediate Biostatistics or in Introductory Biomathematics, the student with appropriate statistical and mathematical background must pass a qualifying examination with an honor grade.

Introductory Biostatistics. This course is concerned with the application of statistical reasoning to medicine and to the logical basis for reaching conclusions from numerical evidence through the systematic presentation of medical data, the analysis and interpretation of variation in biological measurements, methods governing the validity of inferences extrapolated from a sample to a population, and the recognition of common pitfalls and fallacies in the collection, analysis and interpretation of medical data. The course relies heavily on illustrative material from ongoing research and the current medical literature. Emphasis in this course is based on biostatistical principles for use by the future practicing physician as he encounters and interprets laboratory and diagnostic data, and as he critically reads the medical literature.

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Intermediate Biostatistics. This intermediate course is concerned with the theory underlying the material presented in the Introductory Course and includes such additional statistical methods as correlation and regression, analysis of variance, non-parametric statistics and sequential analysis. The course is given from the point of view of the use of biostatistical principles by the medical and biological investigator.

Introductory Biomathematics. This mathematics course is concerned mainly with probability theory and the stochastic processes as they relate to the development and use of mathematical models in biological and medical research. Admission to this course is limited to those students whose mathematical background and competence are adequate to interpret recent applications of mathematics to the medical and biological sciences.

Lectures and laboratory work.

Dr. COLTON and Staff.

PSYCHIATRY

JACK R. EWALT, M.D., *Head of the Department at the Massachusetts Mental Health Center, and Chairman of the Executive Committee of the Department of Psychiatry.*

JOHN C. NEMIAH, M.D., *Assistant Professor of Psychiatry and Acting Head of the Department of Psychiatry at the Massachusetts General Hospital.*

LEON EISENBERG, M.D., *Professor of Psychiatry, and Head of the Department at the Massachusetts General Hospital.*

PSYCHIATRY. *First Year (new program).*—The course in the behavioral and social sciences in the new curriculum consists of eleven one and a half hour morning seminar sessions and eleven afternoon field exercises. Each student selects one seminar series from among the following: Sociological Perspectives on Health Illness and Disease, Social Psychiatry, the Organization of the Medical Profession, Child Development, Seminar on Medical Sociology, Economic Criteria and Public Policy in Health and Medical Care, the Seven Ages of Man, the Role of the Physician in the Hospital Setting, the Basic Concepts of Psychology, Family Medicine and Psychobiology. The field exercises are designed to bring students into direct contact with individual patients and to enable them to develop an appreciation of the social, economic and psychological problems created in the patient, his fam-

ily and the community by illness. Emphasis is placed on an immediate relationship between student and patient under close tutorial supervision with an opportunity for the student to play a meaningful role in the care provided. The settings are clinical but the focus is on such issues as the patient-physician relationship, the meaning of the illness to the patient, the role of the physician in society, and the system of delivering care. The Departments of Medicine, Psychiatry, Surgery, and Pediatrics, and Ecological Dentistry participate.

Lectures and clinics. Dr. NEMIAH and Staff.

PSYCHIATRY. *Second Year.*—The second year consists of nineteen lectures in abnormal growth and development to develop further concepts of psychological functioning. Emphasis shifts to the nature and genesis of abnormal psychological mechanisms manifested in symptoms and behavioral disturbances. Additional hours are given to introduce methods of history taking and examination of patients designed to understand more fully socio-emotional factors in illness.

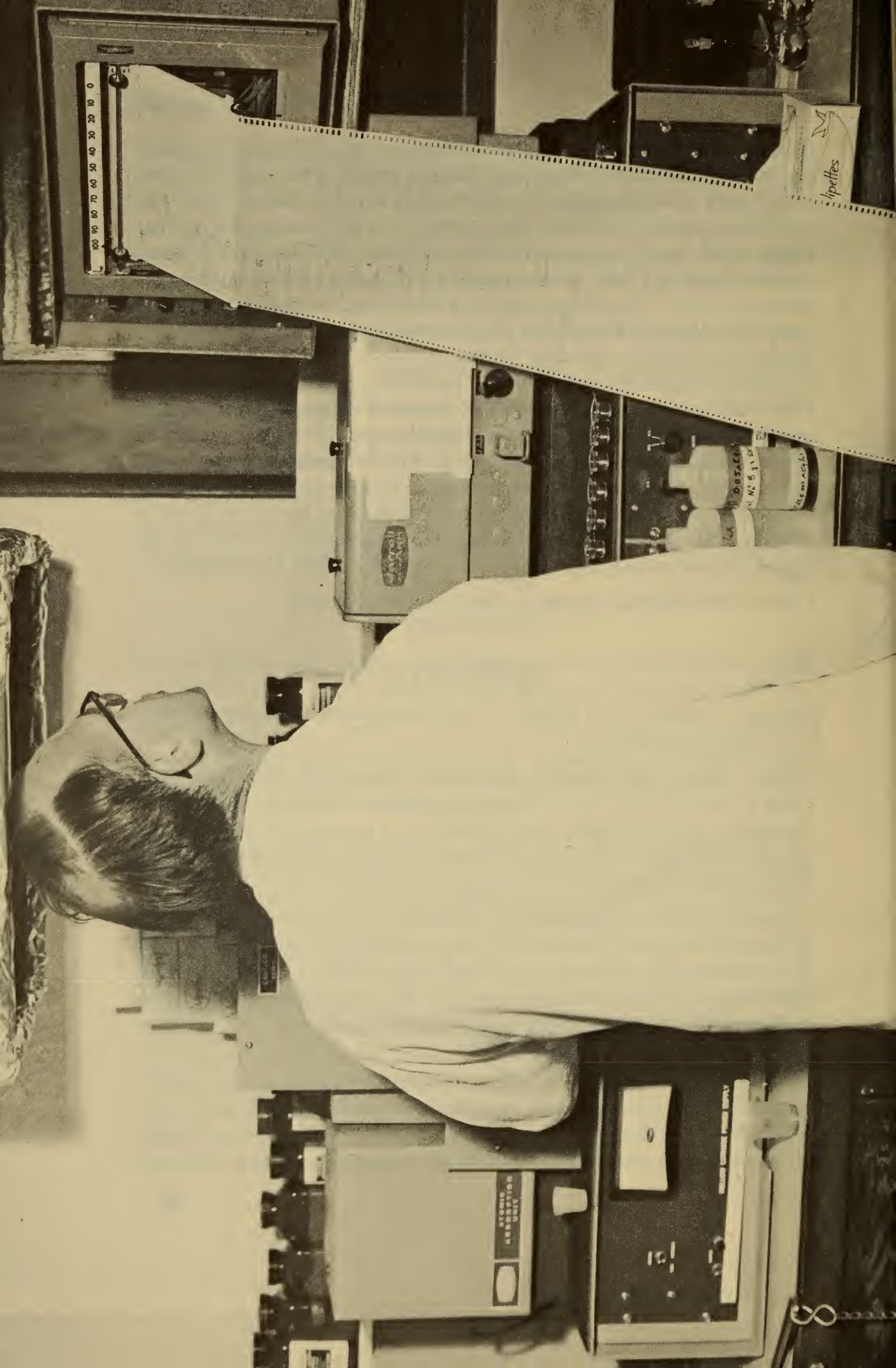
Lectures and section teaching. Dr. NEMIAH and Staff.

RADIOLOGY

HERBERT L. ABRAMS, M.D., *Philip H. Cook Professor of Radiology and Head of the Department.*

First Year.—Radiological instruction during the first year comprises a series of lectures, during the course in Anatomy, designed to introduce and apply the X-ray method as a means of studying gross internal anatomy in health and disease. The practical application of these methods is extended in the Saturday clinics.

Second Year.—During the first semester of the second year, small group exercises and laboratories are conducted in conjunction with the program of correlative teaching, with emphasis on the systemic approach to X-ray interpretation and the correlation of abnormal findings with gross pathology and pathophysiology.



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SYSTEM
ADAPTATION
UNIT

Division of Studies in the Third Year

The 11-Month Principal Clinical Year

The 11-month Principal Clinical Year covers the second semester of the second year, and the first semester of the third year. It is at this time that the student will develop the fundamental skills of diagnosis, therapy, and prevention in clinical dentistry.

<i>Course</i>	<i>Hours</i>
Aseptic Technique	30
Dental Auxiliary Utilization	52
Ecological Dentistry	70
Fund. Stomat. System (F. Occl.)	36
Nutrition	14
Oral Histopathology, Oral Medicine, and Oral Diagnosis	70
Oral Radiology	25
Oral Surgery lectures — 10 hours, clinic — 60 hours	70
Orthodontics	132
Pedodontics	88
Periodontics	161
Pharmacology	6
Restorative Dentistry	
Dental Anatomy	34
Dental Materials	30
Prosthetics	380
Operative and Endodontics	290
	<hr/>
Total	1488

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The tabulated hours overleaf indicate the approximate allotment of time for various subjects covered in the Principal Clinical Year.

As the entering classes are limited, it is possible to reduce the time usually involved in formal courses relating to dental techniques. Individual instruction, demonstrations, seminars and conferences replace the traditional lecture system to a large degree.

A program to instruct the dental student in effective use of ancillary dental personnel provides experience for each student in the performance of clinical procedures with the aid of the trained dental assistant or hygienist, and the certified laboratory technician. Auxiliary personnel are also utilized to relieve the student of a variety of routine but time-consuming tasks.

Dental Anatomy — Drs. VAN LEEUWEN, DOGON, and SOZIO.

Discussions and seminars on tooth form together with techniques practice in reproducing dental anatomy using natural extracted teeth are held concurrently.

A correlation of this course material with that given in the "Fundamentals of the Stomatognathic System" is accomplished by carving teeth in occlusal relation on articulated models using the cone technique.

Nutrition — Professor SHAW and Associate Professor SWEENEY.

Discussion of relations of nutrition to the development, maturation and maintenance of the oral tissues. Discussion of nutritional requirements, relative values of various foods and the preparation of diet histories. Clinic practice in the evaluation of diet histories and in the development of suitable recommendations for the patient.

Ecological Dentistry — Professor DUNNING and Associate Clinical Professor GLASS; Assistant Clinical Professors JONG and WELLOCK; Drs. ALLUKIAN, MOOSBRUKER, and others of the School of Dental Medicine; Professors CURRAN and FEIN of the Medical School, and others.

The goal of this Department is to relate dentistry to the environment in which dental diseases occur and in which dentists must work. The teaching program of the Department includes application of statistical methods to the problems of dental disease in population groups, the uses of various types of disease prevention, the relation of the dentist to society, and the scope of dentistry in comprehensive health service.

The core course begins with material on the development of dental practice and of public health and welfare dental services. Next comes a section on the behavioral sciences. This includes social and cultural approaches to dental care and the individual psychological problems of patients, especially children. A series of sessions is then devoted to the principles of epidemiology, the measurement of oral diseases, clinical trial methods and critique of scientific literature. After this, detailed consideration is given to a number of phases of preventive dentistry, including fluoridation and fluoride therapy. The first half of the course concludes with a discussion of dental needs and resources throughout the country.

The second half of the course covers medical economics, health insurance, programs for the delivery of dental care, the financing of dental care through local, state and federal agencies, jurisprudence, ethics, and a brief consideration of practice management. Following this course, and partly upon externship time, the student makes a survey of the dental health resources in a community of his choice.

Endodontics — Drs. DUNSKY, KRAKOW, GAUM, GOLDSMITH, GOLDSTEIN, MEHLMAN, MILLSTEIN, REUBEN, TINNETTI, WINKLER and ZISSI.

The purpose of the course is to teach the student an understanding of the etiological factors of pulpal and periapical disease and their treatments. The student is expected to understand the role of systemic disease as it relates to altering oral tissue responses to pulpal therapy. Clinical skills are developed in the examination, diagnosis, and treatment of pulpally involved teeth. The course emphasizes the preventive aspects of Endodontics as well as definitive pulpal therapy by non-surgical and surgical means. The correlation of endodontic therapy within the total plan of patient care is stressed throughout the course.

Operative Dentistry — Assistant Professor DOGON, Drs. THOMPSON, ETHERINGTON, VAN LEEUWEN, O'NEILL, BAILEY, MATUSOW, BARSH, HAYNES, C. MILLSTEIN, PAPPAS, SOWLES, Mr. FREEDMAN and Mr. MYERSON.

Throughout the core course (11 months) emphasis is placed upon early student-patient contact with immediate clinical application of treatment procedures. Instruction is given in oral hygiene and the clinical aspects of caries and other dental diseases. By way of lectures, demonstrations, and individual chairside instruction, the student de-

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velops proficiency in examination, diagnosis and treatment planning and treatment procedures; most of the current techniques of cavity preparation utilizing conventional and high speeds are given including one surface gold foil restorations. In conjunction with these techniques a study on various types of dental materials used is given.

Multiple surface gold foil restorations are then taught along with some recently developed clinical procedures. Practice in all phases of operative dentistry continues.

Oral Medicine, Oral Histopathology, Oral Diagnosis — Clinical Professor GURALNICK, Professor GOLDHABER, Associate Clinical Professor GLASS, Drs. MULVIHILL, BURDETTE, SZABO, DEANGELIS, WILGRAM, KRAWCZYK, and staff.

The course is taught as an integrated experience in oral medicine, oral histopathology and oral diagnosis, to introduce the student to the procedures for examining patients, recording findings of the medical history and other data, and integrating these findings into a suggested treatment plan and to recognize normal and pathological states of oral tissues and to correlate the clinical findings with the histological alterations. The management of patients with medical problems is stressed.

Oral Surgery — Clinical Professor GURALNICK, Drs. AGRANAT, BOWEN, DONOFF, EVANS, KIMBALL, LINCOLN, POZATEK, ROSENBERG, SHULMAN, STEMPIEN and the Massachusetts General Hospital oral surgical house staff.

The major portion of a student's oral surgical experience is derived from his clerkship, at the Massachusetts General Hospital, during his externship period. Early in the principle clinical year, however, students take a course in aseptic technique which is the initial experience in surgery. The department of oral surgery collaborates with General Surgery in teaching this and, when possible, plans head and neck procedures of particular interest to dental students. Additionally, as a natural bridge between the basic science curriculum at HMS and the clinical core at HSDM, a weekly series of seminars is given entitled "Case Records from the Oral Surgical Service of the Massachusetts General Hospital." During these sessions, cases are discussed in which the patient's medical problems had important implications in planning the indicated oral surgery.

During the principle clinical year, students will also be offered the series of lectures in oral surgery. This is designed to cover broadly those areas of the specialty which are particularly pertinent and will range from extraction of teeth to reconstructive jaw surgery.

The use of local anesthetic agents will be taught, and experience in the school's oral surgical clinic will also be had during the principle clinical year.

Orthodontics — Professor MOORREES; Drs. DOUGLAS, DEANGELIS, GRØN, LEBRET and CADMAN.

Clinical rounds and seminars on diagnosis of different occlusal anomalies, treatment planning and treatment procedures provide a means to become thoroughly familiar with clinical aspects of orthodontics. These experiences add a measure of perspective for the theoretical part of the course in which emphasis is placed amongst other on growth and development, cephalometrics, occlusion and tissue changes associated with tooth movement. Laboratory technique exercises serve to enhance comprehension of biomechanics in treatment procedures. The longitudinal growth records of twins and their age-matched siblings conducted by Staff serve to illustrate individual patterns of somatic, facial and dental growth and development. The overall objective of the course in orthodontics is to develop sound judgment as a basis for diagnosis and care of children in clinical practice.

Pediatric Dentistry — Associate Professors SWEENEY, SWANSON and YEN; Assistant Professor BUDDE; Drs. COHEN, GOLDBERG, HOOVER, PETERSEN, WATTON, and Staff.

Lectures, demonstrations, tape-slide sequences and laboratory exercises introduce the fundamentals of the subject with emphasis on the physical and psychological development of the well child. During clinical time, students provide chairside dental care to child patients. Pediatric dental X-Ray technique, treatment planning and an understanding of dental development are stressed as is patient management. Laboratory exercises are designed to familiarize the student with new concepts in cavity preparation, pulp therapy and space maintenance.

The preventive aspects in children's dentistry, especially patient and parent education, oral hygiene and personal caries control are additional important components of the course. Laboratory exercises and tape-slide sequences concentrate on space maintenance, correction

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of oral habits and tooth guidance. This course is designed to prepare the student to be able to function in the institutional setting during the one-month Pediatric Dentistry Externship.

Periodontics — Professor GOLDHABER; Drs. EPSTEIN, STERN, FASCIANO, KALIS, SALLOWAY, SEGAL, STONE, HAYES, CHAIKIN, ZAGER, GOLDIN, LOFTUS, STOLMAN, MARINO, DINERMAN, and MULVIHILL.

The student is taught to recognize and diagnose periodontal disease and to comprehend its pathogenesis. He is expected to understand the role of local etiological factors as well as the part played by systemic disease in modifying tissue response to local irritations.

With regard to therapy, emphasis is placed on the elimination of local factors and the institution of preventive procedures. In addition, he is taught the principles of occlusal equilibration and splinting of loose teeth. All students are required to perform periodontal surgery.

Prosthetic Dentistry — Associate Clinical Professor FARRELL; Drs. EHRLICH, FISHMAN, ATWOOD, ATTILLIO, DAVIS, DOLAN, FELLER, FISCHER, FREEDMAN, GENUA, GOLDFARB, GOLDIN, GOLDSTEIN, KAPUR, KAZIS, KUPPERMAN, LAPIDUS, MILLSTEIN (PHILIP), MYERSON, SAMAHA, SIEGEL, SOZIO, and TRAURING.

Prosthetic dentistry which includes complete, fixed and removable prosthesis is taught in the Principal Clinical Year. Through lectures, conferences and demonstrations the student receives clinical and laboratory instruction in the anatomy and physiology of the oral tissues as they apply to prosthetic dentistry, and in the materials and techniques of prosthetic restoration directed toward oral health, function and aesthetics. The students are introduced to Prosthetic Dentistry via Crown and Bridge then to removal partial and complete dentures consistent with the escalation of dental damage. Additional teaching is offered in the hospital externships and in elective periods.

Roentgenology — Associate Clinical Professor GLASS, Dr. SCAVOTTO and Dr. GARCIA.

Principles of applied roentgenology and the interpretation of radiographs including extra-oral and intra-oral, are covered in the second year. In addition, the physical basis of roentgenology, methods in radiation protection and the effects of ionizing radiation on mammals and mammalian cells are presented. Practice in radiographic techniques and interpretation is given in the second and third years.

Surgical Anatomy of the Head and Neck — 4th year elective offered to selected students for two full weeks in November. Clinical Professor GURALNICK and Dr. EDWARDS from the Medical School.

The course is designed primarily to enable the student through his own dissections to gain knowledge of the anatomy of operative oral surgery.

The first week is spent in doing eight regional dissections. The second week is devoted to performing specific surgical procedures with emphasis on anatomical dissection. The laboratory exercises are supplemented by lectures and by the use of motion pictures.

Eligibility for admission is determined by the Fourth Year Promotion Board to whom application should be made by letter prior to May 1st of the junior year.

Dental Auxiliary Training and Utilization — Assistant Clinical Professor Dr. KAZIS; Drs. FIORI and WYSHAK, and Miss BRADBURY. Current dental practice requires the dental health team approach. The hygienist, the chairside assistant, the dental laboratory technician, and the secretary receptionist are at present the accepted members of the dental health team. Before the full potential of team dentistry can be realized, dentists must be given the necessary training in the proper and efficient utilization of auxiliaries in a dental practice. The Harvard School of Dental Medicine has several dental auxiliary programs functioning simultaneously.

The Dental Auxiliary Utilization Program, DAU, is sponsored and funded by a grant from the United States Public Health Service. It is now administered by the Resources and Manpower Development Component of the Division of Dental Health. It has been in operation at Harvard since 1961. The program as planned focuses on:

1. The effective use of dental assistants
2. The use of modern equipment that permits the practice of "sit-down" dentistry and work simplification techniques
3. Positioning of the patient, student, and assistant
4. Maintaining patient control
5. The use of prearranged instrument trays
6. Effective instrument delivery and retrieval
7. Efficient use of water, air, and evacuating equipment
8. Operation and delivery of restorative materials

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The dental student is also afforded the opportunity of not only working with a trained dental assistant in the DAU Program, but also of experiencing a training period with a dental assistant trainee. Harvard cooperates with two vocational schools in the clinical training of dental assistants. Also Forsyth Dental Hygiene students, as a part of the auxiliary program, report on a three-week rotating basis. Assisting the dental students in the performance of prosthetic laboratory procedures are two experienced, highly skilled technicians. Completing the dental team are two trained secretary-receptionists who serve to coordinate the activities of the student with reference to appointments, recording of data, and patient recall. Thus, in reality, the student at the Harvard School of Dental Medicine has the opportunity to receive training within the total concept of the dental team and he is able to avail himself of the services of auxiliary personnel for most of his clinical experience, resulting in enhanced development of clinical confidence and competence.

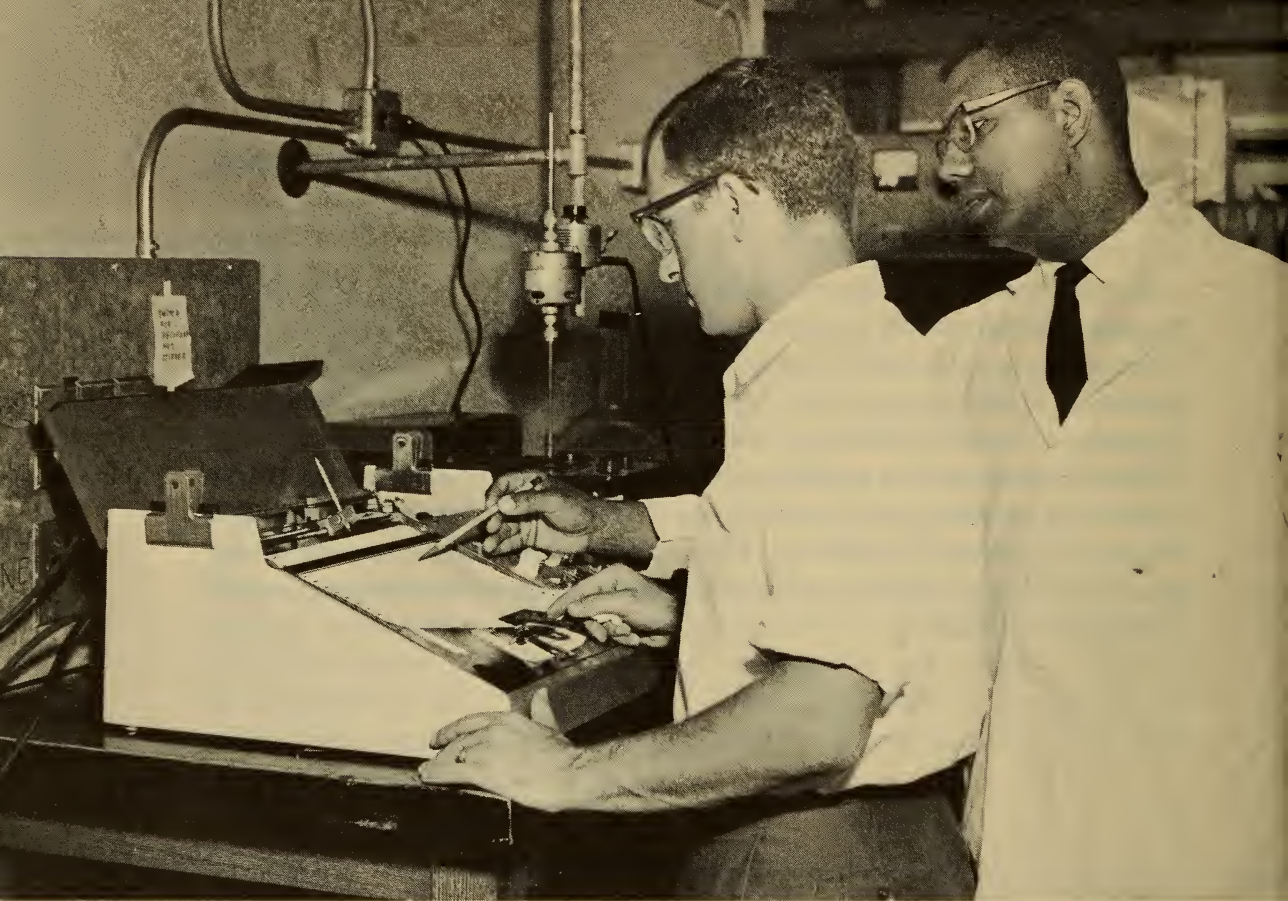
Studies in the Externship Period

The externship period of six months occurs usually during the second semester of the third year and is spent in rotations through the dental facilities of the various affiliated hospitals. During these externship rotations the student gains clinical experience far beyond that of the principle clinical year by functioning as an integral part of the various teams in managing and treating patients with oral disease in all of its variant forms. Among the facilities utilized are the Massachusetts General Hospital (oral surgery); Children's Hospital Medical Center (Pediatric Dentistry); the Veterans Administration Facilities at Bedford, Brockton, West Roxbury, and Court Street (restorative dentistry, periodontics, and endodontics); Community Health Facilities under the aegis of the Ecologic Dentistry Department such as the Martha Elliot and Bunker Hill Health Centers (ecologic dentistry) and the Holyoke Health Center of Harvard University (restorative dentistry, periodontics, endodontics). In addition a short rotation in the utilization of dental auxiliaries of two weeks is also included.

In these rotations each usually consisting of one or two months the student treats a wide variety of patients and diseases, and from the experiences gains the ability to provide dental health care in an institutional setting as a member of the health team.

Studies in the Elective Period

For students who have satisfactorily completed their clinical requirements, the whole 9-month senior year is available as elective time. This time may be used to concentrate in a specific clinical area; to pursue courses at any of the schools of the University, including the School of Dental Medicine, the Medical School, and the School of Public Health; or to conduct original research in basic, clinical, or behavioral sciences under the direct sponsorship of a faculty member at the School or elsewhere. The student may elect to pursue any academically reasonable and professionally responsible course of study during this period.



Degrees Conferred

ON JUNE 17, 1971, FOURTEEN DEGREES WERE CONFERRED

AS FOLLOWS:

D.M.D.

- THOMAS WILLIAM ALBERT, S.B. (*Univ. of Massachusetts*) 1967.
ALEX JOHN BAUMER, III, S.B. (*Tufts Univ.*) 1967.
JOSEPH LAWRENCE BRACKMAN, A.B. (*Harvard Coll.*) 1961.
LAWRENCE ARTHUR BRACKMAN, A.B. (*Univ. of Massachusetts*) 1967; (*Dartmouth Medical School*) 1969.
WILLIAM MAURICE BUNCH, S.B. (*Univ. of Arizona*) 1967.
F. EDWARD GALLAGHER, A.B. (*Princeton Univ.*) 1967.
ALBERT THOMAS INDRESANO, A.B. (*Boston Univ.*) 1967.
JOHN JOSEPH LIPNICKI, S.B. (*St. Peter's Coll.*) 1967.
RICHARD JAY REISMAN, A.B. (*Univ. of Massachusetts*) 1967.
HARRY COLIN SCHWARTZ, S.B. (*Brooklyn Coll.*) 1967.
RAYMOND EDWARD SIATKOWSKI, B.E.E. (*Cornell Univ.*) 1964.

D.M.D. *cum laude*

- ELLIOT VICTOR FELDBAU, A.B. (*Clark Univ.*) 1967.
JONATHAN S. JACOBS, A.B. (*University of Rochester*)
JOHN PATRICK WASHINGTON KELLY, A.B. (*Boston Coll.*) 1964.

Degrees Conferred

ON JUNE 11, 1970, ELEVEN DEGREES WERE CONFERRED
AS FOLLOWS:

D.M.D.

VINCENT JEROME ABBATIELLO, A.B. (*Cornell Univ.*) 1966.
JAMES ALBERT COMMETE, S.B. (*College of the Holy Cross*) 1966.
MICHAEL RICHARD COPPE, A.B. (*Fordham Coll.*) 1966.
JOHN PATRICK COSTELLO, S.B. (*Fairfield Univ.*) 1966.
JEROLD MARTIN FRANKEL, A.B. (*Amherst Coll.*) 1966.
MELVYN RICHARD KROHN, S.B. (*Brooklyn Coll.*) 1966.
CHARLES LIEBOW, A.B. (*Univ. College of N.Y.U.*) 1966.
DAVID IRA ROSENSTEIN, A.B. (*Boston Univ.*) 1966.
MALCOLM EDWARD THORNTON, S.B. (*Fairleigh Dickinson Univ.*) 1966.

D.M.D. *cum laude*

STEPHEN ALAN COLCHAMIRO, S.B. (*Brooklyn Coll.*) 1966.
KENNETH ROBERT DIEHL, A.B. (*Cornell Univ.*) 1966.

Degrees Conferred

ON JUNE 11, 1969, SEVENTEEN DEGREES WERE CONFERRED
AS FOLLOWS:

D.M.D.

- WARREN SHELDON BAER (*Boston Univ.*, 1961-64).
RONALD ERNEST BARBER, M.SC.D. (*Boston Univ.*) 1968.
REGINALD ALEXANDER BAUER (*Univ. of California at Los Angeles*, 1961-64).
BRUCE EUGENE EVANS, A.B. (*Williams Coll.*) 1965.
WILLIAM DENNIS FOORD, S.B. (*Wesleyan Univ.*) 1965.
ANNA-MARIE GRØN, D.D.S. (*Univ. of Copenhagen*) 1952.
RAYMOND DAVID HADDAD, A.B. (*Univ. of New Hampshire*) 1965.
RICHARD STEVEN HYMOFF, A.B. (*Brandeis Univ.*) 1965.
ROBERT JAY LEAF (*Cornell Univ.*, 1961-64).
LAURE MARIE LEBRET, D.D.S. (*Univ. of Paris*) 1947.
JOSEPH FRANK PIECUCH, A.B. (*Univ. of Massachusetts*) 1965.
NORBERT JAMES SHAY, S.B. (*St. Bonaventure of Siena Coll.*) 1965.
ALLEN LEWIS WEINER, A.B. (*Yeshiva Univ.*) 1965.

D.M.D. *cum laude*

- DAVID EDWARD BREYAN (*Boston Univ.*, 1961-64).
LEONARD BRUCE KABAN, A.B. (*Queens Coll.*) 1966.
DONALD MICHAEL KALLIO, A.B. (*Coll. of the Holy Cross*) 1965.
KENNETH JAY ROTHMAN, A.B. (*Colgate Univ.*) 1966.

Students 1971-1972

FOURTH YEAR CLASS (1972)

- Beirne, Owen Ross, A.B. (*Univ. of Calif. — Berkeley*) 1968. Santa Maria, Calif.
 Burnett, Paul Robert (*Univ. of New Hampshire*). Wakefield
 Clayman, Lewis, S.B. (*Brooklyn Coll.*) 1968. Brooklyn, N.Y.
 Finsilver, Edward James, A.B. (*Bowdoin Coll.*) 1968. St. Louis, Mo.
 Greenfield, David Solomon, S.B. (*Polytechnic Institute of Brooklyn*)
 1968. Oceanside, N.Y.
 Iacono, Vincent Joseph, A.B. (*New York Univ.*) 1968. Brooklyn, N.Y.
 Kalyan, Robert James, A.B. (*Harvard Coll.*) 1967; M.S. (*Brandeis Univ.*)
 1968. Watertown
 Needleman, Howard Lee, A.B. (*Rutgers Univ.*) 1968. Maywood, N.J.
 Shafer, Stanley Mark, A.B. (*New York Univ.*) 1968. Bellmore, N.Y.
 Silversin, Jacob Berman, A.B. (*Rutgers Univ.*) 1968. Ventnor City, N.J.
 Stone, David Mark, A.B. (*Boston Univ.*) 1968. Mattapan
 Torelli, Richard Peter, S.B. (*Tufts Coll.*) 1968. Branford
 Wald, Cy, A.B. (*Queens Coll.*) 1968. Kew Gardens, N.Y.

THIRD YEAR CLASS (1973)

- Alexander, Lee Jarrell, A.B. (*Harvard Coll.*) 1968. Ft. Lauderdale, Fla.
 Barry, Gene Norman, A.B. (*Univ. of Houston*) 1969. Nome, Texas
 Billie, James David (*Univ. of N. Michigan*) 1969. Wakefield, Mich.
 Cappuccino, Carleton Charles, S.B. (*Tufts Univ.*) 1969. Wrentham
 Coleman, Everod Augustus, S.B. (*Howard Univ.*) 1969. Detroit, Mich.
 Dann, John Joseph, A.B. (*Coll. of the Holy Cross*) 1969. St. Louis, Mo.
 Elgethun, David Steven, A.B. (*Dartmouth Coll.*) 1969. Stillwater, Minn.
 Esposito, Claudia Ann, A.B. (*Queens Coll.*) 1969. Jamaica, N.Y.
 Hedges, Thomas Richard, A.B. (*Tufts Univ.*) 1969. Brocton
 Hillman Jeffrey Daniel (*Univ. of Chicago*) 1969. Chicago, Ill.
 Kuftinec, Mlader, D.M.S. (*Univ. of Sarajevo*) 1965; PH.D. (*Massachusetts*
Institute of Technology) 1971. Zagreb, Yugoslavia.
 Hoover, Jeffrey, A.B. (*Rice Univ.*) 1969. San Antonio, Texas
 Riley, Edwin Joseph, S.B. (*Boston Coll.*) 1969. Roslindale
 Schneider, Eli Chaim, A.B. (*Boston Univ.*) 1969. Mattapan
 Stashenko, Philip Paul, A.B. (*New York Univ.*) 1969. Terryville, Conn.
 Stone, Jeffrey David, A.B. (*Univ. of Kansas*) 1969. Overland Park, Kansas
 Taylor, Ronald Tyrone, A.B. (*Coll. of Wooster*) 1960; M.Sc. Middlebury
 Coll.; PH.D. (*McGill Univ.*) Linden, N.J.

SECOND YEAR CLASS (1974)

Broisman, Howard P., A.B. (<i>Rutgers Univ.</i>) 1970.	Linden, N.J.
Carter, Paul C., S.B. (<i>State Univ. of New York</i>) 1970.	Kenmore, N.Y.
Ferraro, Nalton F., A.B. (<i>College of the Holy Cross</i>) 1970.	Schenectady, N.Y.
Franklin, Dolores M., A.B. (<i>Barnard</i>) 1970.	Washington, D.C.
Greene, Roderic R., S.B. (<i>Union College</i>) 1970.	Syracuse, N.Y.
Higginbotham, David James, A.B. (<i>Univ. of Utah</i>) 1970.	Alexandria, Va.
Hocevar, Richard A., A.B. (<i>Harvard Coll.</i>) 1970.	Salte Ste. Meine
Howard, Benjamin F., S.B. (<i>Tenn. State Univ.</i>) 1970.	Pulaski, Tenn.
Inglis, Craig M., A.B. (<i>Harvard Coll.</i>) 1970.	Freeport, N.Y.
Mittendorf, Robert Lee, S.B. (<i>Ohio State Univ.</i>) 1970.	San Bernadino, Calif.
Montgomery, William M., S.B. (<i>Bucknell Univ.</i>) 1970.	Waynesburg, Pa.
O'Neil, Gerald T., S.B. (<i>Harvard Coll.</i>) 1970.	Northampton
Plummer, Matthew Wesley, S.B. (<i>Morehouse Coll.</i>) 1965.	Houston, Texas
Sauer, Geo., S.B. (<i>Dartmouth Coll.</i>) 1970.	Medfield
Satin, Sol, S.B. (<i>Univ. of Mass.</i>) 1970.	Revere
Stavropoulos, Athena, S.B. (<i>Tufts Univ.</i>) 1966.	Newton
Taylor, George W., A.B. (<i>Univ. of Virginia</i>) 1970.	Hampston, Va.
Vinson, Walter C., A.B. (<i>Stanford Univ.</i>) 1965.	Freeport, N.Y.
Williamson, Robert J., S.B. (<i>Niagara Univ.</i>) 1970.	Niagara Falls, N.Y.

FIRST YEAR CLASS (1975)

Assael, Leon Allen, A.B. (<i>Columbia College</i>) 1971.	Malverne, N.Y.
Casavantes, Rene Oscar, S.B. (<i>Univ. of Texas</i>) 1971.	New York, N.Y.
Coleman, Frederick, S.B. (<i>Univ. of California — Berkeley</i>) 1971.	San Francisco, Calif.
Davis, Larry Dennis, A.B. (<i>Florida A & M Univ.</i>) 1971.	Tallahasse, Fla.
Dodson, Jeffrey Dunn, S.B. (<i>Massachusetts Institute of Technology</i>) 1968; M.A.T. (<i>Harvard Coll.</i>) 1969.	Bellevue, Wash.
Fazio, Robert Charles, A.B. (<i>Harvard Coll.</i>) 1971.	Clifton, N.J.
Gotcher, Jack Everett, Jr., S.B. (<i>Midwestern Univ.</i>) 1971.	Wichita Falls, Texas
Gutowicz, Alexas Ann, A.B. (<i>Immaculate College</i>) 1971.	Philadelphia, Pa.
Irving, Steven P., A.B. (<i>Northeastern Univ.</i>) 1971.	Randolph
King, Betty Ruth, A.B. (<i>Bennett Coll.</i>) 1971.	Ruffin, No. Carolina
Lazor, Stephen Fred, A.B. (<i>Harvard Coll.</i>) 1971.	San Antonio, Texas
Levine, Mark Elliot, B.Sc. (<i>Brown Univ.</i>) 1970.	Brookline
Lund, William Collins, S.B.E.E. (<i>Tufts Univ.</i>) 1970; M.S.E.E. (<i>Polytechnic Institute of Brooklyn</i>) 1971.	Old Bridge, N.J.

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Niederman, Richard, s.B. (*Univ. of Calif. at Davis*) 1968; M.A. (*Univ. of Calif. at Davis*) 1970. Pasadena, Calif.
Perez, Paul, s.B. (*Univ. of Colorado at Boulder*) 1971. Forthupton, Colorado
Schwartz, Arthur Ira, A.B. (*Clark Univ.*) 1971. Marblehead
Shapiro, Barry Michael, s.B. (*SUNY at Stony Brook*) 1971. Bronx, N.Y.
Yoon, Nancy Ann, A.B. (*UCLA*) 1971. Los Angeles, Calif.

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Suggested Form for Gifts or Bequests

The suggested form for bequests to benefit dental education and research at Harvard is as follows:

"I give (all the rest, residue and remainder) (. . . . dollars) to the President and Fellows of Harvard College, a Massachusetts educational, charitable corporation, for the benefit of the Harvard School of Dental Medicine."

Such an unrestricted bequest for the School would be set up as a separate fund or added to an existing general endowment fund for the purposes of the school, depending on its size. If circumstances permit, it would be well to consult University authorities before drafting any detailed plan for a specified purpose. Further information may be secured from Eugene G. Kraetzer, Jr., Recording Secretary, Harvard University, 225 Franklin Street, Boston, Massachusetts 02110 or from the Office of the Dean, School of Dental Medicine.

